

AR03







This is Alcan Aluminium Limited's 50th Annual Report.

Alcan's first annual report covered only the seven-month period from the Company's incorporation under Canadian law on 31 May 1928 until the year end. It reflected the fact that the Company, then called Aluminium Limited, had acquired on its formation a full equity or partial position in a scattered group of 24 companies engaged in various aspects of the aluminum business in some 13 countries. All of these companies were of modest size; several were sales companies with only minimal capital. Of the total assets of \$70 million, the largest were in Canada (represented by Aluminum Company of Canada, Ltd, incorporated 27 years earlier) followed by companies in Norway, Italy, France, Germany, Spain, Britain, British Guiana (Guyana) and Latin America.

Alcan was thus born as an international company. Its mission was to develop and expand an international business in the new metal aluminum, based initially on its ability to serve world markets from Canada.

In 1928, all the aluminum producers in the world (in eight countries only) turned out 277,000 short tons of primary aluminum of which Alcan produced 41,000 tons in Canada and a little in Norway. As Alcan approaches its 50th anniversary, total primary capacity in some 34 countries of the non-communist world has grown about 50 times to 14 million tons. With its smelting facilities in Canada, and its share of those in eight other countries, Alcan has almost kept pace with the growth, standing at approximately 12 per cent of the total. Aluminum has been established as the leading non-ferrous metal in world commerce, used in virtually every country for countless applications in many aspects of daily life.

Alcan Aluminium Limited is now engaged, through its subsidiaries and affiliates in 33 countries, in all phases of the aluminum business from bauxite mining to finished aluminum end products. About 80 per cent of total assets are in Canada, the United States, Britain and Continental Europe. With the operations on other continents, they make Alcan one of the major companies in the industry, and the leading international aluminum enterprise.

Cover

Northern lakes and rivers supply water power
for the development of aluminum production.

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Directors

Erik Brofoss
Oslo — *Chairman of the Norwegian Regional Development Fund, an agency of the Norwegian Government*

James W. Cameron
Calgary — *Retired Alcan executive*

David M. Culver
Montréal — *President*

Nathanael V. Davis
Montréal — *Chairman of the Board and Chief Executive Officer*

Dr. Roger Gaudry
Montréal — *President of International Association of Universities*

John H. Hale
Montréal — *Executive Vice President*

The Rt. Hon. Viscount Harcourt, K.C.M.G., O.B.E.
London — *Chairman of the Advisory Council of Morgan Grenfell Holdings Limited*

James T. Hill, Jr
New York — *Director of various companies*

Paul H. Leman, o.c.
Montréal — *Vice Chairman of the Board*

Louis Rasminsky, c.c., c.b.e.
Ottawa — *Director of various companies*

Patrick J. J. Rich
Montréal — *Regional Executive Vice President*

Hon. James Sinclair, p.c.
Vancouver — *Chairman of Lafarge Canada Ltd, manufacturers of cement and related products*

Eric A. Trigg
Montréal — *Regional Executive Vice President*

William O. Twaits, c.c.
Toronto — *Director of various companies*

Eric F. West
Lyme, Connecticut
Regional Executive Vice President

Officers

Nathanael V. Davis
Chairman of the Board and Chief Executive Officer

Paul H. Leman, o.c.
Vice Chairman of the Board

David M. Culver
President

John H. Hale
Executive Vice President, Finance

Patrick J. J. Rich
Regional Executive Vice President, Western Hemisphere

Eric A. Trigg
Regional Executive Vice President, Middle East, Asia and South Pacific

Eric F. West
Regional Executive Vice President Europe, Near East and Africa

Duncan C. Campbell
Vice President, Public Affairs

H. Stewart Ladd
Vice President, Personnel

David Morton
Vice President, Corporate Planning

M. G. O'Leary
Vice President, Engineering and Technology

A. A. Bruneau
Secretary

T. F. D. Simmons
Treasurer

Audit Committee

John H. Hale, *Chairman*
Erik Brofoss
Dr. Roger Gaudry
The Rt. Hon. Viscount Harcourt, K.C.M.G., O.B.E.

Personnel Committee

Nathanael V. Davis, *Chairman*
David M. Culver
James T. Hill, Jr
Louis Rasminsky, c.c., c.b.e.
Hon. James Sinclair, p.c.
William O. Twaits, c.c.

Area General Managers

Canada, Fabricating and Sales:
Harold Corrigan, Toronto
Canada, Smelting and Chemicals:
Roger Phillips, Montréal
Caribbean:
J. J. Gagnon,
Mandeville, Jamaica
United States:
Roy A. Gentles, Cleveland
Latin America:
A. F. Black, Rio de Janeiro
Europe:
Ihor Suchoversky, Geneva
Deputy: D. A. Pinn, London
Africa:
R. E. Rosane,
Aix-en-Provence, France
India:
D. A. Corbett-Thompson,
Calcutta
Far East:
David H. Clarke, Hong Kong
South Pacific:
J. B. Clarkson, Sydney
Basic Raw Materials:
Gerald Clark, Montréal

Highlights of 1977

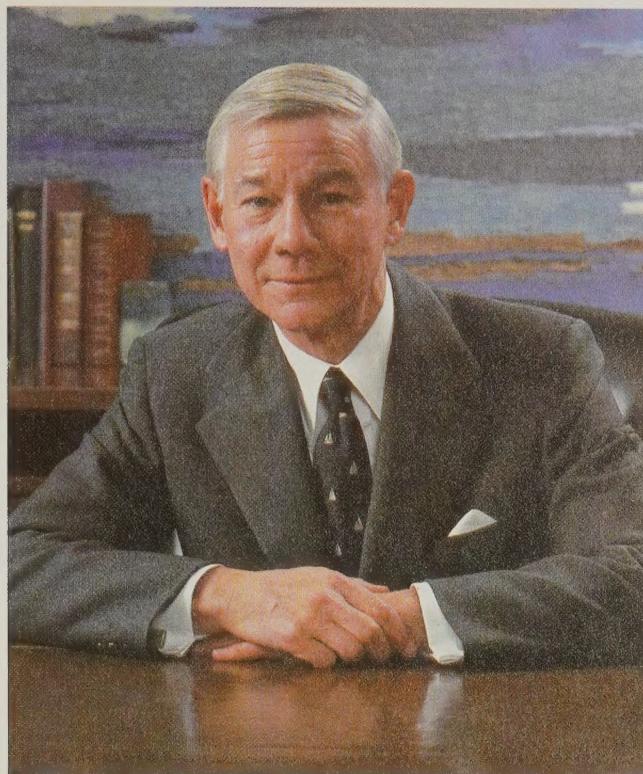
| Operations for the year | 1977* | 1976* |
|--|--------|--------|
| Total shipments of aluminum products ('000 tons) | 1,453 | 1,515 |
| Shipments of fabricated products ('000 tons) | 968 | 953 |
| Total sales and operating revenues | 3,028 | 2,656 |
| Net income | 202 | 44 |
| Capital expenditures | 233 | 138 |
| Number of employees, at year end (<i>thousands</i>) | 61 | 60 |
| Financial, at year end | | |
| Working capital | 909 | 774 |
| Net fixed assets and investments | 1,702 | 1,608 |
| Long-term debt | 749 | 837 |
| Common shareholders' equity | 1,424 | 1,268 |
| Return on average equity (%) | 14.9 | 3.7 |
| Shareholders' position, at year end | | |
| Number of common shares outstanding (<i>thousands</i>) | 40,447 | 40,447 |
| Shares held in Canada (%) | 47.1 | 52.5 |
| Shares held in USA (%) | 39.3 | 33.6 |
| Shares held in other countries (%) | 13.6 | 13.9 |
| Per common share (U.S. \$) | | |
| Net income for the year | 4.98 | 1.14 |
| First quarter | 0.88 | 0.13 |
| Second quarter | 1.23 | 0.17 |
| Third quarter | 1.32 | 0.27 |
| Fourth quarter | 1.55 | 0.57 |
| Dividends for the year | 1.10 | 0.40 |

*U.S. \$ millions — except where otherwise stated

Annual Meeting
The Annual Meeting of the shareholders of
Alcan Aluminum Limited will be held
on Thursday 16 March 1978, at 10 a.m.,
in the Chateau Champlain Hotel, Montréal.



The Chairman's Message



Nathanael V. Davis
*Chairman of the Board and
Chief Executive Officer*

This being Alcan's 50th anniversary year, it is gratifying to be able to report results for the past year which established several new records. Consolidated net income of \$201.5 million, or \$4.98 per share, reached a new high both in dollar terms and in earnings per share. Sales and operating revenues exceeded \$3 billion for the first time.

Canadian smelters returned to more reasonable levels of profitability as compared to 1976 when operations were affected by strikes. These and other Group operations benefitted from a strengthening in world aluminum prices which contributed to better operating margins. Most geographic areas of Alcan's business realized significant improvement in earnings, particularly the United Kingdom, Australia and the Far East, while profits in Continental Europe and Latin America remained strong.

In 1977 the declining value of the Canadian dollar relative to the U.S. dollar, combined with the decline in the U.S. dollar against most other currencies, had a beneficial effect on Alcan's operating

results. Canadian producers and, to a somewhat lesser degree, all other dollar-based producers experienced an improved competitive position over those located in areas where local currencies hardened. Japanese producers were particularly hard hit, bearing the combined burdens of high energy costs, low operating rates and a market which weakened as the yen strengthened.

While we are pleased with Alcan's improved results which represent a 14.9 per cent return on average equity, these earnings are based on historical asset values and costs and are, therefore, overstated in real terms. The section on inflation accounting, on page 40, is intended to provide additional perspective, although necessarily imprecise, on the real earnings. As a capital intensive industry facing enormous increases in the cost of replacing and expanding our facilities, we must achieve high percentage returns based on historical costs in order to maintain the fabric of our business over a period and to meet future growth in demand.

1928. 31 May
Aluminium Limited
is incorporated
under Canadian
Federal charter.

With improved earnings, the dividend rate was increased from the 1976 level of 10 cents per quarter to 20 cents per quarter for the first two quarters of 1977, and to 35 cents for the last two quarters of the year. Dividends for the year were \$1.10 per share.

We estimate that the growth in aluminum consumption in the non-communist world in 1977 was a modest two per cent, following the good recovery in 1976. Last year's growth was strongest in the United States, fairly static in most other major markets but weak in Japan. Alcan's sales of fabricated products matched the growth in world consumption but its ingot sales declined, so that total shipments were down by four per cent from 1976.

In the capital expenditures program, apart from normal outlays to extend and upgrade fabricating plants and to improve smelter environments, several large projects are under way. Alcan is participating in a major bauxite export project in Brazil and in a new alumina plant in Ireland. In addition, our Brazilian subsidiary is expanding its alumina and smelter facilities.

Also included in the capital program are two smelter expansions announced in 1977. The first is a 25,000-ton (50 per cent) increase in the capacity of Alcan Australia's smelter in New South Wales, and the second is the start of a new 'greenfield' smelter in the Saguenay region of Québec. The new Québec smelter will have an initial capacity of 63,000 tons and is designed to support two additional expansions of 63,000 tons each. Adequate power will be available from the Company's hydroelectric facilities in the area and the decision to proceed was taken after the Québec Government established a new indexed tax policy for private power generation which gave us confidence to make a start on a long-term staged program of modernization and expansion.

In March, Alcan and Revere Copper and Brass Inc. announced an agreement in principle for the sale to Alcan Aluminum Corporation of Revere's

aluminum reduction plant and sheet mill at Scottsboro, Alabama. The agreement was subject to receipt by Alcan Aluminum Corporation of a favourable anti-trust business review letter from the U.S. Department of Justice. This condition has not been met and the U.S. Department of Justice has filed a lawsuit challenging the acquisition on anti-trust grounds. Because the last closing date under the agreement has passed, the agreement is now terminable by either party. At the time of writing, it is impossible to predict whether the agreement will be consummated.

These major thrusts to broaden and modernize our base in raw materials and smelting should be viewed in the perspective of Alcan's 50-year record in building an international aluminum company. The half-century may be divided into two periods of about 25 years.

The period from 1928 until the early 1950s was largely devoted to building a profitable smelter operation in Canada as a supplier of ingot products to world fabricators and to other producers. These were the years when our Québec hydroelectric facilities and smelters were greatly expanded to supply the Canadian market (about 15 per cent of the total output) and the world. A second smelter and power installation, the Kitimat-Kemano project, was built in British Columbia in the early 1950s. The original raw materials base in British Guiana was broadened, and new sources were developed in Jamaica and West Africa, mainly to supply the Canadian smelters. Our 25th Annual Report in 1952 records that 70 per cent of metal sales were in the form of ingot products and 30 per cent in semi-fabricated form. As this 25-year period ended, it is also interesting to note that Alcan's return on average equity for the preceding five years, 1948 to 1952 inclusive, was 17 per cent, when levels of inflation were relatively low.

In the early years of the second period, 1952 to 1977, several independent fabricators integrated

1947
Edward K. Davis,
the Company's founding
president, retires.

backwards into smelting, and other producers expanded their own smelting capacities, with the result that both groups virtually disappeared as buyers of our ingot. Alcan's response was to shift its thrust to the greater development of its fabricating outlets in order to secure a firm market load on its large Canadian smelting base. Major expenditures, about \$1 billion in total, were devoted to the expansion of its then modest fabricating operations in Canada, the United Kingdom, Europe and Brazil, and to the establishment of pioneer operations in many smaller markets where little or no local fabricating existed. In the 1960s, Alcan entered the large U.S. market as a fabricator, where it had been for many years only a seller of ingot.

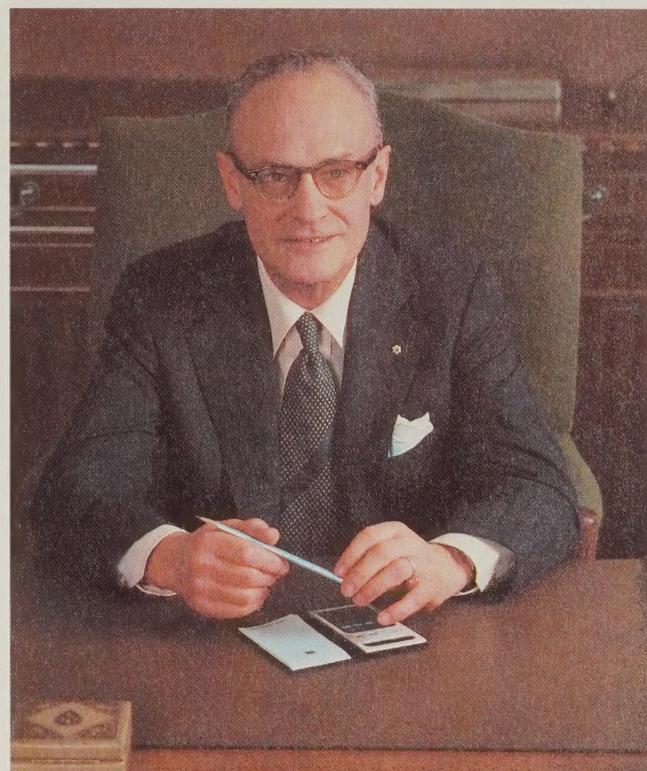
In certain of these markets, mainly Australia, Britain and Brazil, where smelting was economically justified and energy available, the need for domestic production was met by Alcan and others. But the main thrust of the second 25-year period was maintained. It has brought about the development of an international fabricating system which is interdependent with our major smelter base in eastern and western Canada. As this second 25-year period ended, the balance between ingot and fabricated sales had been reversed, with fabricated sales in 1977 accounting for 67 per cent of total sales.

As we enter our third-quarter century, we believe that Alcan has a much stronger integrated posture, with increasingly diversified sources of raw materials, sound power and smelter bases in Canada and several other markets, and a worldwide spread of fabricating plants to develop aluminum's untapped potential.

While for the immediate future the major projects in which we are engaged bear on increased raw materials and smelting capacity, future growth is likely to be more equally balanced between the raw materials, primary smelting and fabricating sectors of the business.

During the past year some changes were made in the responsibilities of the senior officers of the Company. The format of this report is intended to identify these officers and their functional, regional and area spheres of activities. The conduct of our international activities falls to these people and to

1966, 28 April
The corporate name
Aluminium Limited is
changed to Alcan
Aluminium Limited.



Paul H. Leman
Vice Chairman of the Board

the many managers and employees who are attached to the companies which comprise the Alcan Group located in numerous countries.

On behalf of the Board, we wish to express appreciation for the dedicated efforts of all Alcan personnel who have contributed to the greatly improved results for the past year.

Nathanael V. Davis

Nathanael V. Davis

Paul H. Leman

Paul H. Leman

Montréal, Canada
2 February 1978

The President's Message



David M. Culver
President

The substantial improvement in Alcan's performance in 1977 over the previous year resulted in part from a return to more healthy labour relations in our plants in Canada. In particular, the start up of those smelters which had been closed by strikes in 1976 and the early part of 1977 went smoothly and in an atmosphere of constructive co-operation. Furthermore, as the year progressed, we experienced in an increasing number of instances the benefits of a problem-solving approach by all concerned. A three-year contract was negotiated at Kitimat in October, which contract was subsequently approved by Canada's Anti-Inflation Board. Continued improvement in industrial relations is essential throughout industry.

Activity was unusually vigorous in parts of our operations in 1977, and our people performed well under heavy pressures. Responding to government attitudes and regulations consumed an increasing amount of management time. Cost control and more efficient use of overhead dollars had to be emphasized as a sound means to fight continued inflation and to increase productivity.

Steps were taken in 1977 to increase our research, technical and process development activities. A decision was made to expand our research centre at Kingston, Ontario, and this work will get started in 1978. This will lead to some rearrangement of the work at the Arvida research centre over the next two years. By the time these changes are completed, the number of people employed there will equal traditional levels. Also in the Saguenay region of Québec, the Company committed itself to a hydroelectric research project which, by means of advanced and novel techniques, seeks to increase the power production from its existing system by an amount sufficient to support an annual production of 25,000 tons of aluminum. If that amount of additional hydro capacity had to be built from scratch today, we estimate it would cost at least \$20 million.

Also in the research and development field, a new series of strong, highly-formable alloys received a limited market test during the year. We are encouraged to expect that these alloys will find an effective application in the manufacture of aluminum

automobile radiators. We successfully initiated the use of water-borne cold-rolling lubricant at our Kingston, Ontario, sheet mill. A new paint roller-coater was developed which significantly increases the yield of saleable painted sheet.

Bringing these and other examples of Alcan technology to the market place demands a high level of professional marketing ability. One area where the skills are under continuous development is in building products in North America. In the USA, Alcan introduced in 1977 a new aluminum siding panel 'Shingl-Wood'®. This is the first time a new profile has been brought to the American siding market since we introduced 'Driftwood'® eight years ago. 'Shingl-Wood'® will be supported by a consumer television program this year.

1977 was a successful year for our shipping, trading, engineering and insurance companies. All performed effectively and contributed to profits.

There were some rough spots as always. The severe winter conditions experienced in the Northeastern parts of the USA caused unusual and unfavourable costs to be incurred by our large Oswego, N.Y. sheet complex. It was doubly unfortunate that, at the same time, technical problems since resolved were encountered with the ingot supply to Oswego from Canada.

Jamaican alumina operations experienced another loss year as a result of high costs due largely to high bauxite taxes, and partly to the consequent loss of third-party sales of alumina made in Jamaica. It must be said, however, that despite the departure of some skilled managers from Jamaica, the management of this complex operation — now starting its 26th year — did a most commendable job in minimizing the losses.

In Newfoundland, a difficult decision was taken to close down the operation of Alcan's fluorspar mines at St. Lawrence because they are no longer economic or competitive with other sources. Following discussions on a confidential basis with both the provincial and federal governments in early June 1977, the

Company made a public announcement on 22 July that the mines would be closed on 1 February 1978. This is a bitter decision for the 178 employees affected, for the Company, and for the entire community. All efforts are being made to help our employees re-enter the labour market through our own resources, through our participation in the Joint Consultative Committee with the two governments, our generous loss-of-employment settlements, and our contacts with other employers. Where appropriate, financial assistance is also provided to long-service employees and their families.

Alcan's shipments to third parties in 1977 were 1,452,900 tons compared with 1,515,100 tons in 1976. Within these totals, sales of fabricated products increased from 953,300 tons in 1976 to 968,000 tons in 1977, whereas sales in ingot form declined from 561,800 tons in 1976 to 484,900 tons in 1977. Sale of ingot products has traditionally represented an important part of our business and we still wish to be active in that field. Much of the drop in ingot sales last year was caused by an unexpected fall-off of orders in the second half of the year. Bookings for such products were picking up again at year end.

Production at our Canadian smelters, including 50,000 tons on a tolling basis for our Japanese partners, reached 911,000 tons for the year against 543,000 tons in 1976. Currently, these facilities are producing at an annual rate of 955,000 tons. The output of smelters in other countries, including those of partially-owned companies, reached 1,156,000 tons, a slight increase from 1,130,000 tons in 1976.

We ended the year with an inventory surplus at a level somewhat in excess of one month of sales.

I am confident that Alcan's area managements, and its operating and sales forces, are well poised to face the problems and the opportunities which the world will present to us in 1978.

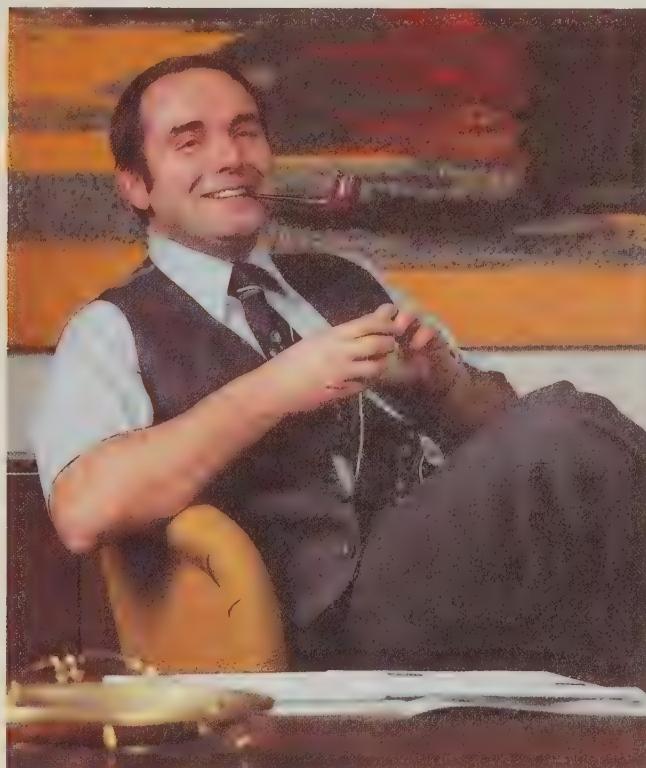


Montréal, Canada
2 February 1978

David M. Culver



The Western Hemisphere Region



Patrick J.J. Rich
Regional Executive
Vice President
Western Hemisphere

Alcan's Western Hemisphere region, its largest in terms of production, sales (\$2,538 million), capital employed (65% of the total) and number of employees, consists of Canada, the United States, the Caribbean and the countries of Latin America. Historically, it contains some of the oldest operating units in the Alcan group, and some of the youngest, namely new fabricating operations in Canada, USA and Latin America. The regional executive vice president in Montréal, to whom the area general managers in the region report, is Patrick J.J. Rich. Mr. Rich is also president of Aluminum Company of Canada, Ltd.

The principal corporate unit in the region is Aluminum Company of Canada which oversees the following main operating organizations: Alcan Smelters and Chemicals Ltd (smelting and chemical plants in Québec and British Columbia), Alcan Canada Products Limited (fabricating and sales activities across Canada), Alcan Aluminum Corporation (fabricating and sales activities in the USA), and Alcan Jamaica Limited (bauxite mining and alumina production in Jamaica). Each of these is managed by an area general manager.

The Latin American Area, also under an area

general manager, contains the national operating subsidiaries and related companies in Mexico and in five South American countries, of which the largest is Alcan Aluminio do Brasil S.A.

Part of the region in 1977, but serving the entire Alcan organization, is the Basic Raw Materials Area. Its role is described on page 14. The region also contains two of Alcan's main research centres, both in Canada, which support regional and world-wide objectives. Alcan Engineering Services, Montréal, supplies engineering, design, consulting and project management services to companies in the Alcan group and, through Alcan Project Services Ltd, makes such services available, on a contract basis, to third-party clients mainly in the aluminum industry.

The principal regional objectives in 1978 will be the expansion and improvement of the Canadian smelters; development of fabricating markets in Canada and USA backed by new technological efforts and research; the resolution of financial and taxation problems in Jamaica; the continued expansion of smelting, alumina and fabricating capacity in Brazil now in progress, and continued participation in the Trombetas bauxite project in the Amazon region.

Canada — Smelting

1901, 22 October
First Canadian
aluminum is made
at Shawinigan smelter
in Québec.



Roger Phillips
Area General Manager
Smelting and Chemicals,
Canada

1925, 10 September
Start of construction
of Arvida Works
in Québec. First metal is
tapped 27 July 1926.

Alcan's very beginning lies in its smelting operations in Canada. It was here, in 1901, in the village of Shawinigan Falls, Québec, that the Company's first aluminum smelter began producing the metal. Today, Alcan Smelters and Chemicals Ltd, Alcan's Canadian smelting arm, still produces ingot at Shawinigan, and operates smelters at Beauharnois, Isle Maligne and Jonquière, Québec, and Kitimat, B.C., providing a total capacity of 985,000 tons per annum.

These facilities, all supported by Alcan-generated hydroelectric power, form the major operations of Alcan Smelters and Chemicals. The present smelting capacity at the second largest plant, Kitimat, which opened in 1954, is 295,000 tons, of which 50,000 tons will be used for the next 24 years for toll-smelting of alumina into ingot for Alcan's Japanese affiliate, Nippon Light Metal Company, Ltd, under an agreement signed in 1974. Alcan Smelters and Chemicals also operates alumina capacity of about 1,400,000 tons, sufficient to supply the Québec smelter system, and is an important producer and seller of inorganic chemicals.

During the first quarter of 1977, the Québec smelters were still recovering from the extended strike in 1976. However, with the cooperation of the employees, the restart progressed smoothly. By the beginning of the second quarter and for the balance of the year the smelters were operating at high efficiency. Production for 1977 totalled 911,000 tons, including the tolling tonnage, compared with 543,000 tons in 1976.

The primary customers for the ingot produced are Alcan fabricating operations in Canada and the USA. While these outlets purchased less metal during 1977 than originally estimated, the Company's policy of selling to third-party customers was reinforced by sales to users in various parts of the world, including the People's Republic of China.

The announcement in May of the decision to proceed with the first phase of the planned 189,000-ton Grande Baie smelter in the Saguenay region of Québec marked an important step in the Company's expansion and modernization plans. Ground clearance at the new site, about 30 kilometres from the Jonquière complex, was completed in the fall, and construction is due to start this spring.

1951
Construction of
smelter-power complex
at Kitimat-Kemano,
in British Columbia,
completed 1954.

The 63,000-ton first stage at a capital cost of \$200 million, including electrode-making and service facilities for the following two 63,000-ton phases, is scheduled for operation in 1981.

The new smelter will benefit economically from its proximity to the extensive infrastructure of support facilities owned by the Company in the district. Alcan's hydroelectric generating capacity in the Saguenay is also sufficient to support the new smelter.

Realization of the smelter expansion program will lay a base for a subsequent progressive rebuilding and expansion of Alcan's older smelters in the Saguenay region without serious intervening loss of production capacity and with significant improvements in working and environmental conditions, productivity and energy conservation.

On the labour front, strikes at the Shawinigan smelter and the Roberval and Saguenay Railway were settled in the first few weeks of the year and satisfactory industrial relations existed at all operations during the balance of 1977. In October, a new three-year collective agreement was signed between the Company and the employees' union at Kitimat. It provides for an 8.8 per cent wage increase in the first year, 7.2 per cent in the second year and 33 cents per hour plus a cost of living allowance in the third year. No collective agreements in the smelter system are due for renegotiation until 1979.

Capital spending over the year amounted to \$90 million, of which a large portion was directed towards environmental controls and improving employee working conditions. This program of upgrading both internal and external plant environments will continue through 1978.

Certain uneconomic Company facilities were closed down during the year and the decision was made to cease production at the St. Lawrence, Newfoundland, fluorspar mines by 1 February 1978. This closing, which resulted in a net write-off of \$8.4 million against Alcan's 1977 operations, was made necessary after outside consultants confirmed the mines were no longer economically viable. About 175 employees were affected by the shutdown and the Company, in addition to making compensation payments, worked with government officials in seeking alternative employment for them.

1977
Start of construction
of 63,000 t.p.a.
aluminum smelter at La
Baie in the Saguenay
region of Québec.

Canada – Fabricating and Sales

In 1902, Alcan established its first fabricating plant in Canada at Shawinigan, Québec to produce wire and cable products. From that start has developed a significant Canadian manufacturing and sales organization now grouped under Alcan Canada Products Limited with 1977 sales of 247,000 tons, valued at \$409 million. These included 63,000 tons of ingot and 184,000 tons of semi and fully manufactured aluminum products. At year end the company was producing in 27 manufacturing locations in Québec, Ontario and across Canada, employing 4,600 people.

The increase in sales volume in 1977 was 6 per cent, with major boosts in the wire and cable and rolled products sectors. Sales this year included aluminum plate and extrusions for 824 grain cars, and CP Rail's prototype aluminum coal hopper cars. Volume increases in wire and cable were accounted for primarily in bare cable shipments to utilities in eastern and western Canada.

Product development in the transportation section continued at a high level. The LRC (light, rapid, comfortable) passenger train, developed by a consortium of Alcan, Dofasco, and Bombardier-MLW, reached fruition with an order for two complete trains for Amtrak's Vancouver, B.C. to Portland, Oregon run, and the announced intention of the Canadian Government to purchase 10 trains for Canadian rail service through VIA Rail. This is expected to result in orders for aluminum extrusions, sheet and plate. In addition, product development for automotive applications was increased, and initial quantities of extrusions and sheet were supplied for evaluation.

During 1977, selling prices continued to be controlled under the Federal Government's Anti-Inflation program, preventing the company from achieving North American market prices for some sheet and foil products.

By year's end modest expansion of the industrial wire and cable facilities at Bracebridge, Ontario was completed and production had commenced from the new \$5 million cable mill at St. Augustin, Québec, bringing the number of fabricating facilities in the province to 10.

Process development continued with emphasis on continuous casting and rolling technology developed in recent years at Jonquière, Québec.

1940
Opening of Kingston, Ontario, sheet and extrusion plant.

1971
Saguenay Works, Jonquière, starts continuous sheet-casting production in June.

The Caribbean

Alcan Jamaica Limited, which is responsible for operating Alcan's bauxite mining and alumina facilities in Jamaica, produced a total of 887,000 tons of alumina in 1977, compared with 844,000 tons in 1976. The 1977 tonnage represented approximately 30 per cent of the Group's total alumina requirements for its own use and sales commitments. Alumina shipments to Alcan smelters in Canada amounted to 47,000 tons, or 5.3 per cent of Jamaica's production, compared with 2.5 per cent in 1976. At the beginning of 1978, the Jamaican alumina plants were operating at a rate of 882,000 tons per annum, about 75 per cent of capacity.

Alcan Jamaica's business continues to be adversely affected by the uneconomic level of taxation in Jamaica resulting from the imposition of a bauxite production levy in 1974, which is substantially higher than in other bauxite producing countries. This makes it increasingly difficult to maintain sales from Jamaica to established or potential third-party customers, even at prices which do not cover the full cost of production and taxation in Jamaica. As a result, third-party sales, which constitute by far the major part of the market for Alcan Jamaica Limited's production, involve the company in significant loss. In the event that the uneconomic level of taxation is maintained, Alcan Jamaica faces not only a reduction of its third-party markets, but continuing losses.

Talks between the Government of Jamaica and Alcan regarding such questions as ownership of land and bauxite reserves, Government participation in the company's equity, and expansion of existing mining and processing facilities, continued during the year and are still in progress. The company continues its efforts to bring these protracted negotiations to a satisfactory conclusion.

The Alcan aluminum fabricating and service operations in Jamaica are also faced with economic constraints which made for a difficult year in 1977.

The company's operations in Trinidad continue to perform satisfactorily, including bauxite trans-shipment and bulk storage, aluminum fabricating, and general trading.



J.J. Gagnon
Area General Manager
Caribbean

1943
Jamaica Bauxites Limited, now Alcan Jamaica Limited, is founded and produces in 1952 first Jamaican alumina at Kirkvine.



Harold Corrigan
Area General Manager
Fabricating and Sales,
Canada

Basic Raw Materials

Alumina requirements for the smelters of the Alcan group and for sale to third parties were supplied in 1977 mainly by company-owned alumina plants in Canada and Jamaica, and by Queensland Alumina Limited, a major producer in Australia in which Alcan holds a 21 per cent interest. About 15 per cent of alumina needs were met by various swap and purchase agreements. The subsidiaries in Brazil and India have their own bauxite and alumina production.

For the Canadian alumina plants in Québec, 1.7 million metric tons of bauxite were obtained through Alcan's participation in a mining consortium in the Republic of Guinea, and lesser amounts were purchased from Guyana, Sierra Leone and Surinam.

To help meet Alcan's planned needs for those basic materials, and to balance future alumina production with the specific processing requirements of the different types of bauxite to be used, Alcan is participating in two new joint projects in both of which it took the original initiative. The first is the Mineração Rio do Norte project in the Amazon region of Brazil which is opening up a bauxite source of world significance. This project, being built at a cost of over \$300 million by Brazilian partners and an international group of aluminum companies, will begin deliveries of bauxite to its owners in 1979. Alcan's share of the exports will be 1.2 million metric tons annually at the start and will be directed to the alumina plants in Québec for which it is characteristically well suited.

The second project, on which agreement was finalized on 25 January 1978, is for the construction of an alumina plant in the Republic of Ireland with an initial capacity of 800,000 metric tons per year, production to start in 1982. This project was launched by Alcan in 1974 but later deferred because of the world recession. It will transform various imported bauxites and export the alumina to the participants' smelters in Europe and elsewhere, or to third-party buyers. To be built at an estimated cost of over \$500 million, the plant will have three owners, Alcan Ireland Limited 40 per cent, Billiton Aluminium Ireland Limited (a company within the Royal Dutch/Shell group) 35 per cent, and Anaconda Ireland Limited (a subsidiary of The Atlantic Richfield Company) 25 per cent. The choice of



Gerald Clark
Area General Manager
Basic Raw Materials

1973, August
First shipment to Canada
of bauxite from Boké, Guinea,
where development work had
begun in 1969.

United States

Sales and operating revenues for Alcan Aluminum Corporation were up significantly over 1976, with customer demand remaining strong throughout the year. As the largest aluminum company engaged primarily in fabricating in the United States, it accounted for 24 per cent of total Alcan revenues. Despite the higher sales and operating volumes, profits dropped from the 1976 level because increased manufacturing costs could not be fully passed along.

During the year, Alcan Aluminum Corporation entered into an agreement to purchase for about \$200 million the aluminum smelter, sheet mill and related assets of Revere Copper and Brass, Inc., at Scottsboro, Alabama. The proposed acquisition would give Alcan its first source of primary aluminum in the USA and strengthen its competitive position. The current status of this proposed acquisition is given in the Chairman's remarks on page 6.

Performance of the company's seven operating divisions was mixed, although revenues were up in all cases. The growing markets for beverage-can

(Continued next page)

Basic Raw Materials (Continued)

Ireland was dictated by the excellent plant site on the deep water of the Shannon estuary, by logistical considerations, by Ireland's membership in the E.E.C. and by the Irish government's encouragement of export industries. The plant has been designed by Alcan for an ultimate capacity of 2.4 million metric tons. Construction will start in the second quarter of 1978.

The supply and movement of raw materials (bauxite, alumina, petroleum coke, etc.) to Alcan group companies, the sale of raw materials to third parties and the planning function for Alcan's needs and investments in this sector of the business are handled throughout the Alcan group by a management organization in Montreal known as the Basic Raw Materials Area. It also operates two shipping companies to handle bulk movements for Alcan and to provide liner services to other shippers in North and South America, the Caribbean and Europe.

Latin America

United States (Continued)

sheet and building-products sheet aided the performance of Alcan Sheet and Plate. The division supplied auto-body sheet to the automotive industry for weight reduction purposes for the first time in 1977. It is also involved in development programs with automotive and component manufacturers to reduce the weight of cars by making, by a patented process, metal components such as radiators.

Alcan Building Products reaffirmed its position as an innovator by introducing 'Shingl-Wood'® siding which has the appearance of wood shingles and is the first new style of siding to be introduced in nine years. The division completed the acquisition of V.E. Anderson Manufacturing Company, a leading window and door manufacturer, and strengthened its distribution network by opening seven new product service centres. Alcan benefitted from the strong growth in the building and construction market which is expected to continue during 1978.

Pricing in the highly competitive electrical conductor market remained weak although sales were up for Alcan Cable's two divisions. Sales of insulated cable accounted for the majority of the increase, but the market for bare conductor remained depressed. Market conditions should improve for both product lines by mid-1978. Alcan Cable is equipping a new insulated cable plant in Bay St. Louis, Mississippi to begin production in late 1978.

The service centres operated by Metal Goods division experienced a year of modest growth, due mainly to increased sales in the housing and transportation markets but demand for capital goods uses, a major market, increased more slowly. Metal Goods, which is the largest distributor of non-carbon metals in the U.S., also purchased its twenty-first centre to serve the Cleveland, Ohio area. A twenty-second centre will open in Beaumont, Texas in early 1978.

Alcan Metal Powders' sales were up slightly from 1976. The market for copper powders was strongest, with the division increasing its market share. Several new pigment products were introduced in 1977, primarily for roof coatings. Alcan Sales division, a leading supplier of aluminum ingot products to independent fabricators, enjoyed a good first half but ingot sales weakened considerably during the last six months of the year.

1960
Creation of Alroll, Inc.
to build a 100,000 t.p.a.
hot-rolling mill at
Oswego, N.Y.

1965
Alcan Aluminum
Corporation is
incorporated to merge
Company's operations
in the USA.



Roy A. Gentles
Area General Manager
United States

Alcan's Latin American companies operated in favourable economic conditions during 1977, except in Mexico. The favourable conditions are likely to continue in 1978 and to extend to Mexico.

Brazil's gross domestic product is estimated to have grown more than five per cent in real terms in 1977, and aluminum consumption increased by some 12 per cent.

Alcan Aluminio do Brasil S.A. again set new sales and earnings records. The modern sheet mill at Pindamonhangaba began operations in April 1977 and contributed significantly to the year's earnings. Construction continued on schedule on the 30,000-ton expansion of the company's Saramenha smelter, to start operating in late 1978.

Construction also continued as planned by Mineração Rio do Norte S.A. on its major bauxite project on the Trombetas River in Brazil's Amazon region. The details are given in 'Basic Raw Materials'.

In Mexico, total aluminum consumption declined during 1977, as the new administration severely restricted government spending in view of the country's difficult balance of payments situation and the heavy devaluation of the peso in late 1976. As a result, Alcan Aluminio, S.A., the fabricating company, made only a modest gain over 1976 in the dollar value of its earnings. The company appears to be well placed to take advantage of the stronger economy expected in 1978 and beyond.

Aluminio Alcan de Colombia, S.A. and Alcan Aluminio del Uruguay S.A. again showed good profits in 1977, in each case a record. During 1977, Alcan moved to minority (49 per cent) shareholdings in Aluminio Alcan de Colombia and in Alcan de Venezuela, S.A., thereby permitting the two companies to continue expanding without restrictions under Andean Community rules. Construction of a second extrusion press was started in Colombia. An economic upturn got under way in Argentina.

Again in 1977, Alcan Aluminio (America Latina) Limited strengthened its network of sales agents and its product range in trading throughout Latin America. It also reaffirmed Alcan's continuing presence as a supplier of aluminum ingot to those Latin American countries which do not produce their total needs of primary aluminum.

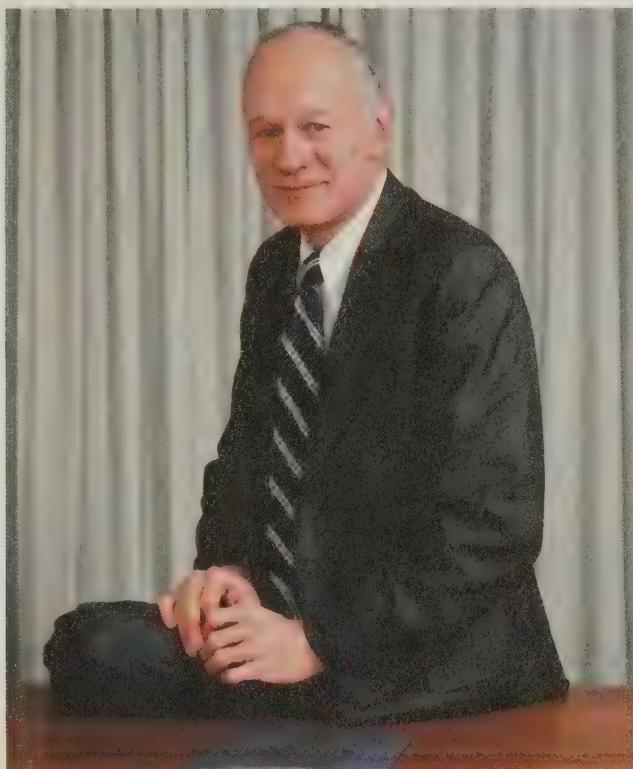
1940
Foundation of
Aluminio do Brasil S.A.,
now Alcan Aluminio
do Brasil S.A.,
with aluminum
smelter at Saramenha.



A.F. Black
Area General Manager
Latin America



The Europe, Near East and Africa Region



Eric F. West
*Regional Executive
Vice President
Europe,
Near East and Africa*

Alcan's Europe, Near East and Africa Region, its second largest in terms of size of business, embraces two main operating areas, the first being Europe including the United Kingdom and Near East, and the other, the continent of Africa. The regional executive vice-president, Eric F. West, is a member of Alcan's executive management committee.

The present European area was formed in 1977 through the merging of the UK area, including Scandinavia and Ireland, with the Continental area which included the rest of Europe and the Near East. This merging assists in the coordination and rationalization of Alcan's operations within the European Economic Community. Alcan's enlarged European Area, with its headquarters and area general manager located in Geneva, constitutes a business with \$930 million in sales, \$603 million in capital employed (about one-fourth of Alcan's total) and some 16,000 employees, also one-fourth of the total.

The British subsidiaries, directed by the management holding company Alcan Aluminium (UK) Limited, London, have a leading position in fabricating and close to one-third of total smelting capacity in the UK. In Continental Europe, Alcan Europe N.V. is the holding company for fully-owned fabricating

businesses in Belgium, France, Germany, Italy and Switzerland, the largest facilities being in Germany. It holds a 25 per cent interest in the leading aluminum company in Spain. Through its 25 per cent position in one of the major Norwegian aluminum producers, Alcan receives upwards of 150,000 tons of aluminum ingot per year which it fabricates or sells through its European system. Two trading companies, based in Germany and in Switzerland, are engaged in ingot distribution and international sales in Europe, the Middle East and North Africa.

During 1977, the smelters of the European industry were operating at full available capacity and this should have been the first year in which European production fell below demand. However, the general economic weakness in the major countries in the second half created a significant drop in aluminum sales and a rise in inventories with a corresponding softening of prices. An improvement in the business climate will be needed to restore stability to the aluminum markets in Europe in 1978.

Alcan's objectives in 1978 in Europe are to strengthen still further its fabricating business, mainly in specialized product lines which have been successfully established in the market.

Europe

Alcan's participation in the European aluminum business goes back to the Company's formation in 1928 when it acquired interests in scattered small companies engaged in fabricating and sales in France, Germany and Spain, smelting in Norway, alumina production in Italy, bauxite mining in France, Yugoslavia and Trieste. The Italian operation was abandoned, the interests in Yugoslavia and Trieste disappeared as a result of World War II. A British fabricating business had been started in 1926 by the subsidiary of Aluminum Company of Canada, Ltd which had been selling Canadian aluminum in the UK since 1909. Other utensil and rolling operations in Germany and Switzerland were acquired in 1929.

From these beginnings, Alcan's interests have been developed mainly in fabricating in all the principal countries, and in smelting in the UK and Scandinavia. Bauxite is still mined in France and sold in Europe.

In 1977 in the European Economic Community, Alcan's consolidated sales of aluminum were 402,000 tons, of which 190,000 tons were in the UK and 212,000 tons on the continent. The decline, from 450,000 tons in 1976, reflected the general economic slowdown and weaker aluminum demand in the second half of the year. However, the improvement in prices and margins over those prevailing in 1976 resulted in higher profits for the year as a whole.

In the United Kingdom, the strength of the demand for Alcan's products, particularly in the first half of 1977, and improved margins on products gave Alcan Aluminium (UK) Limited sharply improved results for the year. While commercial activity slackened in the second half, there is the prospect of some recovery in demand which, if it occurs, would permit current profitability levels to be maintained.

During 1977, Alcan acquired the 25 per cent interest in Alcan Booth Industries which had been held by Kaiser Aluminum and Chemical Corporation, bringing Alcan's equity in this leading fabricating company to 100 per cent. In addition, the remaining minority interests in Luxfer Limited and in Thomas Bennett Limited were purchased. The former is engaged in the high-pressure gas cylinder business with plants in Nottingham and in Riverside, California, while the lat-

1926
Aluminiumwerke
Göttingen GmbH is
incorporated in Germany,
became in 1962 Alcan
Aluminiumwerke GmbH.

1909

Starting as Northern
Aluminium, Alcan Booth
Industries Ltd is now
the leading aluminum
fabricator in the UK.



Ihor Suchoversky
Geneva
Area General Manager
Europe

1972, March
Start up of Alcan (UK)
Limited's Lynemouth
132,000 t.p.a.
aluminum smelter in
Northumberland.

ter specializes in anti-bandit glass and storefronts. The assets of Gardiner Alumin, a leading aluminum window manufacturer, were purchased to strengthen Alcan's integrated position in the building products field.

Alcan's smelter at Lynemouth in Northumberland operated at close to its full capacity of 132,000 tons per year with high efficiency. The capacity of this facility could be expanded to about 190,000 tons without additional investment in power generating capacity which is owned by Alcan.

In Germany, the large-scale rolling mill of which Alcan is half owner, and Alcan's own fabricating subsidiaries produced much improved profits in 1977. Capital expenditures of close to \$10 million, fully covered by cash generation, were mainly directed to facilities for specialized products, namely a paint line to operate in conjunction with the rolling mill at Göttingen, and an automated line for machining diesel car pistons at the Nürnberg foundry and piston plant. Alcan has become recognized as a supplier of quality aluminum parts to the German automotive industry.

New German legislation regarding employee and union representation in company direction has been implemented in Alcan Aluminiumwerke GmbH in a spirit of constructive cooperation. Employees for the first time have elected their members for the 12-member supervisory board which must be composed of an equal number of employee and shareholder representatives by mid-1978. The experience with worker representation in Germany, both at board level and in works councils, has been good.

In Belgium and France, Alcan extrusion operations continued to supply a sizeable portion of the demand, mainly in the building and automotive sectors. A significant technological advance was the installation by Aluminium Alcan de France at its Lucé plant of a semi-automatic unit for handling extrusions which is expected to nearly double the production capacity of a conventional extrusion press. This may prove of value to Alcan's extrusion facilities in other countries.

Although there was a slowdown in the Italian economy in the closing months of 1977, Alcan's fabricating operations in Italy had their best year in terms of financial results. In 1978, higher planned capital



D.A. Pinn
London
Deputy Area General Manager
Europe

Africa

expenditures will upgrade the facilities for rolled products and for recycling aluminum at the secondary smelter.

In Switzerland, Alcan's foil-producing company in Rorschach installed an eight-colour high-speed rotogravure machine for printing specialty packaging materials and is developing the market opportunities for this production.

Of Alcan's minority participations in Europe, the largest investment is a 25 per cent equity in the Norwegian aluminum producer Årdal og Sunndal Verk a.s. This company achieved better earnings than in 1976, although below expectations. The start up of a new 32,000-ton potline at Årdal began on schedule in November, and first steps were taken in the comprehensive modernization and expansion of its older smelter at Høyanger. The company is expanding its fabricating activities.

In Sweden, Gränges Essem AB (21 per cent owned) experienced a much reduced domestic demand with no offsetting increase in export demand. Results for the year were disappointing and no significant improvement is anticipated in 1978.

In Spain, Empresa Nacional del Aluminio, S.A. (Endasa), in which Alcan's equity is 25 per cent, continued to consolidate its position as the country's leading smelting and fabricating company, supported by Alcan experience in technology and marketing. Endasa holds a 55 per cent interest in a large smelter and alumina complex now under construction at San Ciprian on the Atlantic coast. Alcan is providing engineering design for the alumina plant which will enter production in 1979, with an initial capacity of 800,000 metric tons. A doubling of the plant's capacity is under active study. Alcan now participates in Spain in the rigid container manufacturing business with a 50 per cent direct interest in Productos Aluminio de Consumo, S.A., to which it provides technology and marketing knowledge in this field.

In Ireland, Unidare Limited, a diversified manufacturing company in which Alcan has a 25.5 per cent interest, continued to progress and completed the year in accordance with plan.

Alcan started to sell aluminum and to search for bauxite on the African continent at least 40 years ago, and has undertaken market development through fabricating over the past 30 years. In March 1977, recognizing the need to provide an area management for development of investment and trading policies in Africa, Alcan Aluminium Africa Limited was established with registered head office in Montréal and operating headquarters in Aix-en-Provence, southern France, where Alcan's French bauxite operations are centered.

The Company's directly managed fabricating interests in Africa remain concentrated in Nigeria and Ghana. In 1977, Alcan Aluminium of Nigeria Limited's sheet mill was prevented by industrial action from operating at capacity levels and, with its linked manufacturing company Flag Aluminium Products Limited, showed marginally lower profits. The Nigerian economy is fundamentally sound and Alcanigeria is increasing its rolling capacity by some 50 per cent. Meantime, the equity of both companies is being restructured to meet government requirements, reducing Alcan's participation to 60 per cent maximum. In Ghana, after higher volume and record profits in 1977, Ghana Aluminium Products Limited is completing the extension of its factory to produce additional products and to expand its roll-forming capacity.

In South Africa, Huletts Aluminium Limited (24 per cent owned by Alcan) operated in an economy depressed by reduced export earnings and lower foreign investment. The company's profitability was maintained at the levels of 1976 in spite of the weak domestic demand. Its sheet-rolling capacity was enlarged and a broader product range will be available in 1978. Elsewhere in South Africa, Silicon Smelters (Pty) Limited, one-third owned by Alcan, had another year of losses due to a surplus of silicon and low prices on world markets. There is little likelihood of recovery in 1978.

Alcan holds a minority position in Compagnie des Bauxites de Guinée, in the Republic of Guinea, one of the world's largest bauxite-producing enterprises. This company produced 7.2 million metric tons of bauxite for export to participants, including Alcan.



R.E. Rosane
Area General Manager
Africa

1959
Interest is acquired
in Flag Aluminium
Products Limited,
Nigeria, and in Ghana
Aluminium Products Ltd.

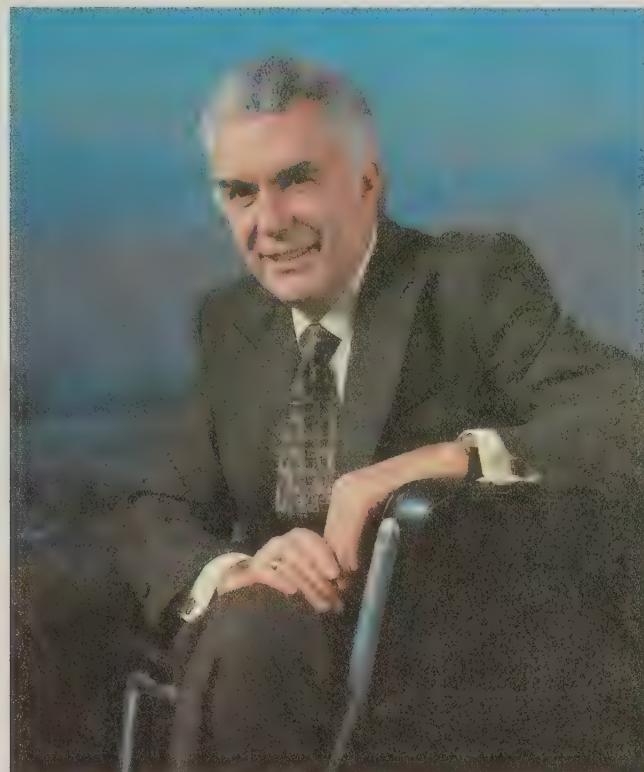
1963
Opening of Alcan's
first Nigerian rolling
mill at Port Harcourt.

1929
Aluminiumwerke A.-G.
Rorschach is founded
in Switzerland.

1951
Aluminio Iberico S.A.,
incorporated in Spain,
was merged into
Empresa Nacional
del Aluminio S.A. in 1969.



The Middle East, Asia and South Pacific Region



Eric A. Trigg
*Regional Executive
Vice President
Middle East,
Asia and South Pacific*

Alcan's third operating region, the Middle East, Asia and South Pacific, covers a vast territory with hundreds of millions of inhabitants, where the aluminum industry ranges from the size and high development of that in Japan to new beginnings in Indonesia and the rising potential of the Middle East. Alcan's capital employed in the region is \$277 million and consolidated sales last year were \$325 million. Eric A. Trigg, regional executive vice president, and three area general managers, located in Sydney, Hong Kong and Calcutta, are responsible for Alcan's interests in the region.

The aluminum industry is well established in Australia, India and Japan, and Alcan has played a significant role in each. In Japan, a national market second in size only to the USA, Alcan has participated for all of its 50 years. It has a 50 per cent interest in one of the leading Japanese aluminum enterprises, and in the largest manufacturer of aluminum foil and paste products. In Australia and India, the Company took part in establishing the industry 40 years ago and holds a major position in both countries. Australia has become the world's leading producer

of bauxite and exporter of alumina. Through its participation in this phase of the industry, Alcan obtains alumina supplies for its Australian smelter at Kurri Kurri and for its Kitimat smelter on Canada's Pacific coastline. Over many years, Alcan has also developed the bauxite mining industry in Malaysia and exports its production to Japan and other markets.

As in many other nations, Alcan's path of development in New Zealand, Malaysia, Indonesia and Thailand has been through pioneer fabricating operations which are now making good progress. Through Alcan Asia Limited in Hong Kong and Tokyo, and its representation in numerous countries, international sales of aluminum products are conducted throughout the region.

In the Middle East, Alcan has engaged in trading activities for many years and is now actively studying business and investment opportunities, linked to the energy resources and market potential of the area. For the government of Iran, the Company is making a feasibility study for a new aluminum smelter in that country and the question of alumina supply from India to Iran is under active discussion.

India



D.A. Corbett-Thompson
Area General Manager
India

The economy of India has been gathering strength due particularly to good monsoons and improved agricultural production. Demand for aluminum increased at a faster rate than GNP in 1977 but could not be fully met by domestic suppliers because all Indian producers have been subject to power cuts due to overburdened State systems. Limited imports of aluminum were permitted in 1977 to meet some of the shortfall and it is expected that total 1978 demand of about 255,000 tons will still not be filled by enlarged domestic production.

The aluminum industry has also been handicapped for three years by a government pricing policy which permits only 50 per cent of supply to be sold, with a heavy excise duty, at open market prices, while the other 50 per cent, destined for power transmission uses, must be sold at prices which cover only cash costs of production. Some relief from these controls is expected in 1978.

These industry problems were shared last year by Indian Aluminium Company, Limited which is the largest integrated aluminum enterprise in India. The company is owned 55 per cent by Alcan and the remainder by individual and institutional shareholders. Its smelter production in 1977 was 72,700 tons, only 56 per cent of capacity, compared with 72 per cent in 1976. The drop was due to greater cuts in power supply than in the previous year, compounded by a ten-week strike at one of its smelters. Total sales were 77,000 tons, of which about 60 per cent were in fabricated form. Net income in dollar terms was higher than in 1976.

In anticipation that demand for aluminum products will continue to grow and that the earnings outlook will improve, Indian Aluminium is modernizing its sheet mill in the Calcutta area, is planning to expand in the near future its foil capacity in the Bombay area and expects to obtain government approval to enlarge its rolling and extrusion capacities, also near Bombay. The company is also pursuing the prospect of expanding its alumina capacity for export purposes.

1938

Aluminium Production
Company of India
Limited is incorporated;
name changed in 1944
to Indian Aluminium
Company, Limited

1941

Aluminum sheet mill
is operative at
Belur, near Calcutta.

1943

Production starts at
Company's first Indian
smelter at Alupuram.

Japan

Japan has the second largest installed aluminum smelting capacity (1.8 million tons), and the second largest aluminum market, of all free world countries. In 1977, its aluminum industry succeeded in reducing its heavy burden of financial losses in the first half of the year, but its basic problems persisted, aggravated by the rise in the exchange value of the yen.

Consumption of aluminum showed strength in the first half, prolonging the 30 per cent recovery of 1976, but declined in the second half to show a drop of at least three per cent for the year. Japanese producers stepped up their average operating rates by over 10 per cent in the year but the softening in demand resulted in a rebuilding of surplus inventories to a high level by year end.

Faced with the problem of high power costs because of their heavy usage of imported oil, the Japanese producers have been hard pressed to obtain domestic prices sufficient to offset such costs. Prices showed some improvement in the early months of 1977 but the competition from imports kept the domestic prices under pressure, and the strengthening of the yen made the international market prices of the imported metal even lower in Japan. Domestic price levels were held down and financial losses continued.

The Japanese government and industry are pursuing measures of realignment, including new production cuts, but the outlook is uncertain except to say that losses are likely to continue in 1978, particularly if the yen remains high.

In these difficult conditions, one of the major producers, Nippon Light Metal Company, Ltd, 50 per cent owned by Alcan, is making strenuous efforts to reduce costs and overheads. It has also moved to strengthen its market security through expansion of its fabricating activities. It achieved total sales of \$935 million in all types of products in 1977.

Alcan's other 50 per cent owned company, Toyo Aluminium K.K. (Toyal), again achieved a good profit in 1977. Alcan's interest in this company comes under the Far East Area. Further details are on page 23.

1931

Predecessor company
of Toyo Aluminium
K.K., now the leading
foil producer, is
incorporated in Japan.

1953

Fifty per cent interest
acquired in Nippon
Keikinzoku K.K., now
Nippon Light Metal
Company, Ltd.



Norman F. Macfarlane
Executive Vice President
Alcan Asia and
South Pacific Limited

Australia and New Zealand

Alcan Australia Limited, in which Alcan holds 70 per cent of the equity, is a leading member of the domestic industry. With its production of aluminum sheet, extrusions, foil, building products and other manufactures, it holds a prominent place in the Australian market and its aluminum smelter in New South Wales is now undergoing an expansion.

Although the recovery in the Australian industrial economy in 1977 was slower than expected, Alcan Australia had improved results. A growth of 8 per cent in sales revenues was attributable mainly to some strengthening of domestic ingot prices which are, however, still lower than international levels. Some further improvement in prices should be seen in 1978 as the economy moves ahead.

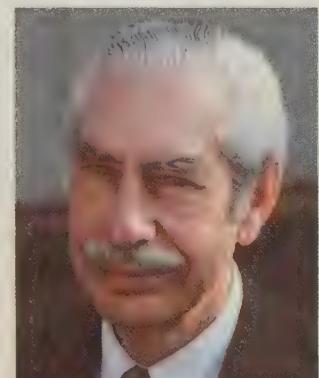
Primary aluminum production at the Kurri Kurri smelter was close to its capacity of 50,000 tons. Work has commenced on the construction of an expansion of 50 per cent in the smelting capacity and this will be ready for production late in 1979. The additional electricity supply for the new capacity is already under contract from coal-fired power sources. Alcan Australia is also planning the upgrading of its fabricating facilities.

Alcan Queensland Pty Limited holds a 21 per cent interest in Queensland Alumina Limited which operates the world's largest alumina plant at Gladstone. Alcan's income from this source showed a significant improvement over 1976.

The economic climate in New Zealand deteriorated in the second half of 1977 and the outlook is for little improvement during 1978. While demand for aluminum followed the trends of the overall economy and second half shipments of Alcan New Zealand Limited were down over the first half, price increases for semi-fabricated products are expected to be approved by the government due to cost inflation pressures. Alcan New Zealand, along with its window and anodizing subsidiary companies, will continue to consolidate its position as the country's major aluminum semi-fabricator and to take advantage of its opportunities when the economy improves.

1939
Australian Aluminium Co., now Alcan Australia Limited, is founded.

1961
Alcan's sheet rolling and remelt plant opens in New Zealand.



Far East

Alcan's Area office for the Far East is located in Hong Kong, the management centre for the Company's participation in Malaysia, Thailand, Indonesia and in certain Japanese interests. Trading operations for South and East Asia are managed also from Hong Kong by Alcan Asia Limited, a company which, in addition, handles international product and technical sales in Japan.

Total ingot sales for the Area were 51,000 tons in 1977 in the face of intense competition in the latter part of the year. Several metal sales contracts and one technical service contract were renegotiated in Japan. Further, 11,000 tons of ingot were sold to the People's Republic of China.

All companies were profitable during the period and most exceeded their plans by significant margins. P.T. Alcan Indonesia, which has established itself as an extrusion and anodizing operation for the local market in its four years of existence, achieved a high net income compared to the past, but this is the last year it benefitted from the tax holiday granted to new industries.

Aluminium Company of Malaysia Berhad, 34.5 per cent owned by Alcan, achieved a higher sales volume of its rolled and extruded products but price control legislation again prevented it from earning a satisfactory return.

Bauxite production by Johore Mining and Stevendoring Co. Ltd in Malaysia was 700,000 tons, mostly for sale to Japan. This company successfully renegotiated its mining leases during the year and is in the process of selling a 30 per cent equity interest to local partners.

Expansion plans under way include the construction of a new conversion plant by Toyo Aluminium K.K., the largest foil producer in Japan. The plant is to be built north of Tokyo and will use clean atmosphere production techniques to make pharmaceutical packaging materials.

Alcan Thai Company Limited is also in the course of expansion with the installation of a second extrusion press in its Bangkok plant.

Although the Far East market is currently under strong competitive pressures, 1978 plans call for only a slightly reduced income performance compared to 1977.

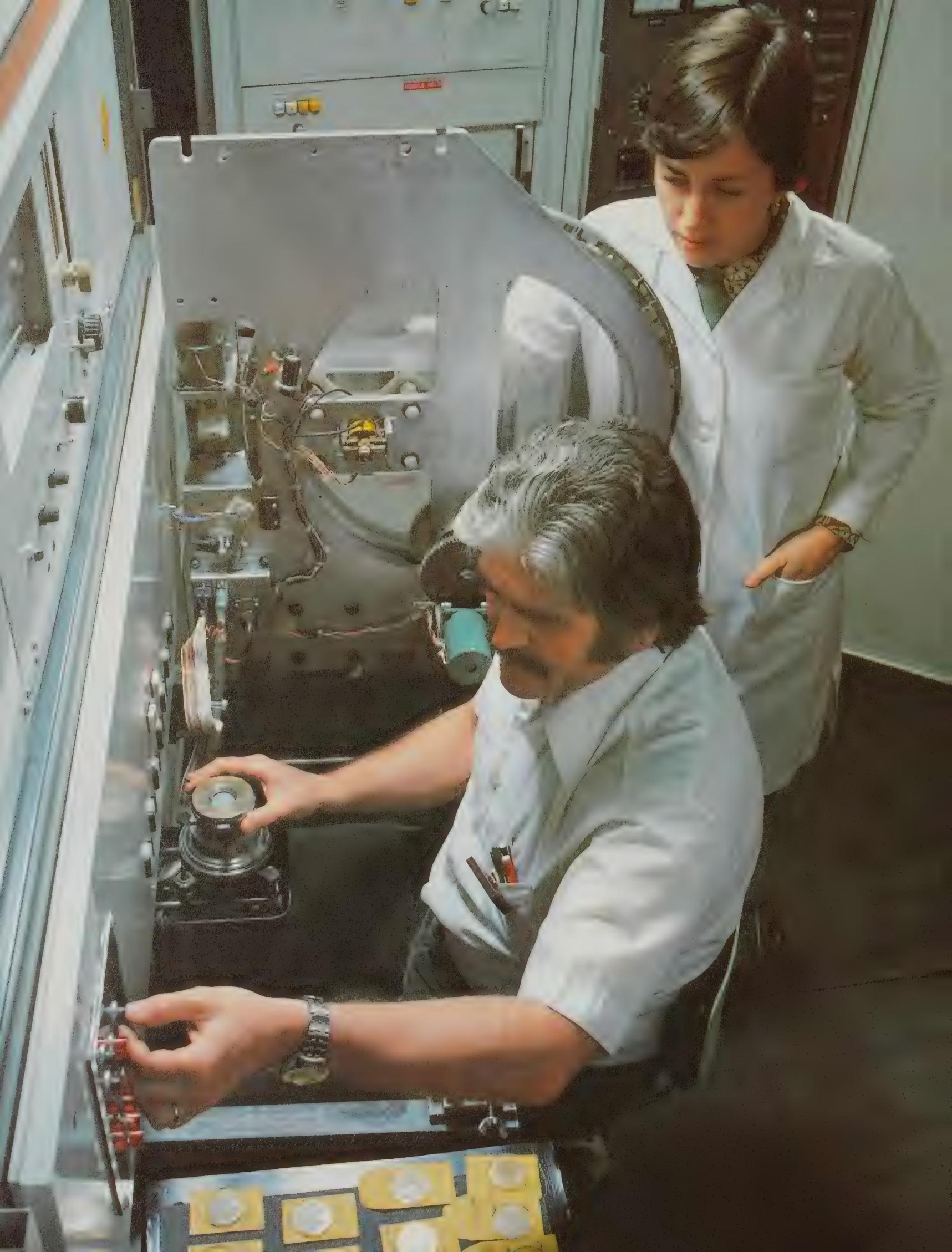
1969
Start of aluminum production at Kurri Kurri smelter, Australia.

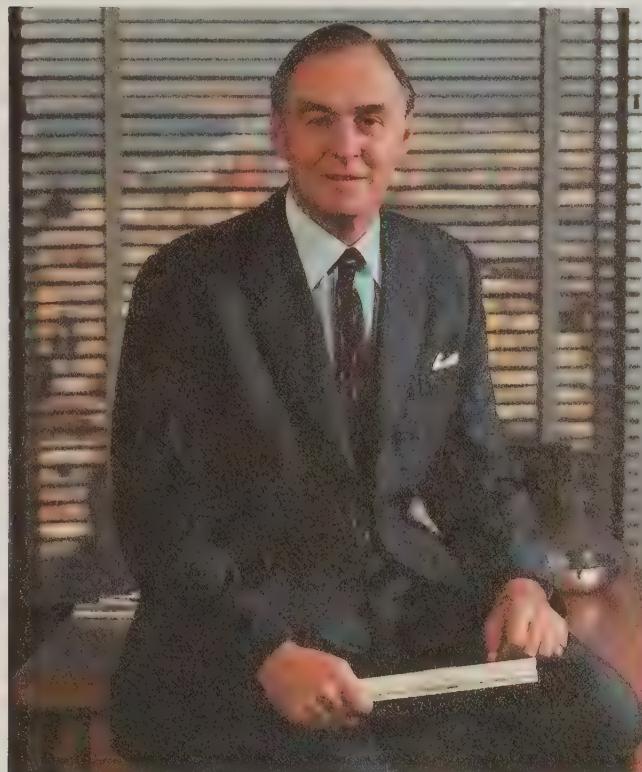
J.B. Clarkson
Area General Manager
South Pacific



David H. Clarke
Area General Manager
Far East

1956
Southeast Asia Bauxites Limited begins mining in Malaysia.





John H. Hale
Executive Vice
President, Finance

Net income in 1977 was \$201.5 million or \$4.98 per share, a new record for Alcan and a large improvement over the 1976 earnings of \$44 million or \$1.14 a share. These encouraging results were achieved in the second year of economic recovery from the 1974-75 recession and following a return to normal operations at the Québec smelters.

Total aluminum sales revenues rose by 13 per cent to \$2,390 million despite a 4 per cent reduction in volume. Fabricated products sales amounted to \$1,942 million compared to a revised \$1,674 million in 1976, a 16 per cent gain reflecting higher volume and prices. Ingot revenues showed a 4 per cent gain to \$448 million, with higher realizations being partially offset by lower volume. A quarterly comparison of the year's ingot sales shows strength in the first two quarters, with economic recovery and fears of metal shortages resulting from reduced production in the U.S. Pacific Northwest leading to both higher volume and prices. However, the third and fourth quarters were marked by generally weaker ingot demand attributable to inventory liquidation, and slower economic growth patterns. The demand for

fabricated products was more even and remains firm.

Operating revenues at \$152 million were 55 per cent higher than in 1976. These results include for the first time revenues from tolling ingot under a 25-year contract with Nippon Light Metal Company, Ltd.

Cost of goods sold and operating expenses increased by 6 per cent to \$2,276 million compared to \$2,155 million for 1976 which included additional costs for the Canadian smelter strike, and for metal purchases. The 1977 costs reflected continuing, although lower, inflation rates, a different product mix, as well as the effect of foreign exchange. Inventory profits in 1977 are estimated at \$30 million before taxes.

Selling, research and administrative expenses rose by 10 per cent while interest expenses were 11 per cent lower at \$90 million due to a combination of reduced borrowings and generally lower interest rates.

Research and development expenditures were in the order of \$26 million compared to \$24 million in 1976 and \$22 million in 1975.

Gross Profit Analysis By Products

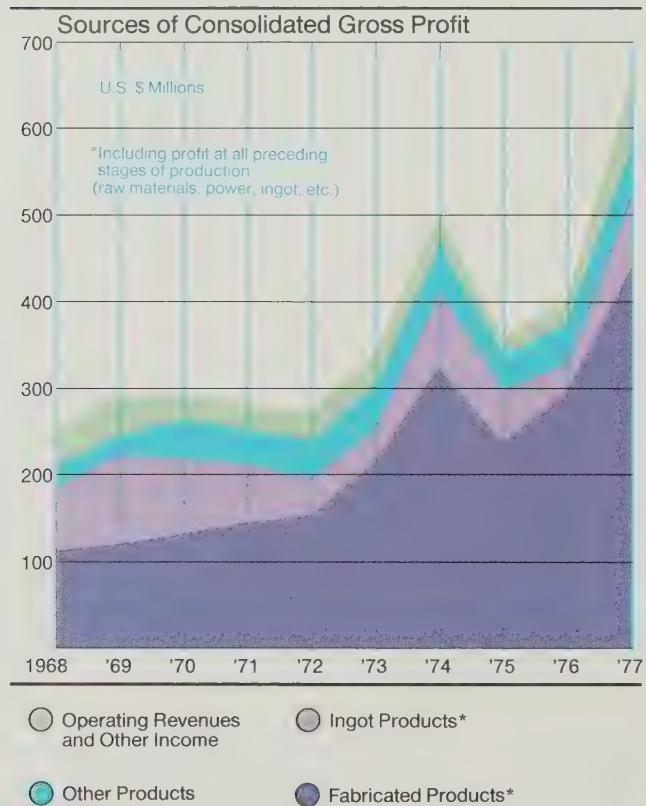
Consolidated gross profit amounted to \$626 million compared to \$386 million in 1976, widening the gross profit margin on sales and operating revenues to 21 from 15 per cent.

Gross profit on fabricated products amounted to \$441 million compared to \$295 million in 1976, resulting in a margin of 23 per cent, up from 18 per cent the previous year.

For ingot products, gross profit was \$89 million, up from \$31 million in 1976, which resulted in a margin improvement to 20 from seven per cent. The 1977-76 margin comparisons are distorted, particularly in the case of ingot products, by the negative effects on the 1976 results of the Québec strike.

Other products' contribution to gross profit was substantially higher than in the previous year, amounting to \$56 million compared to \$37 million in 1976. Sales of other metals and the return to normal operation of the chemical division of Alcan in Canada are factors in this improvement.

The gross profit on operating revenues, and other income rose to \$70 million from \$37 million reflecting a number of small improvements.



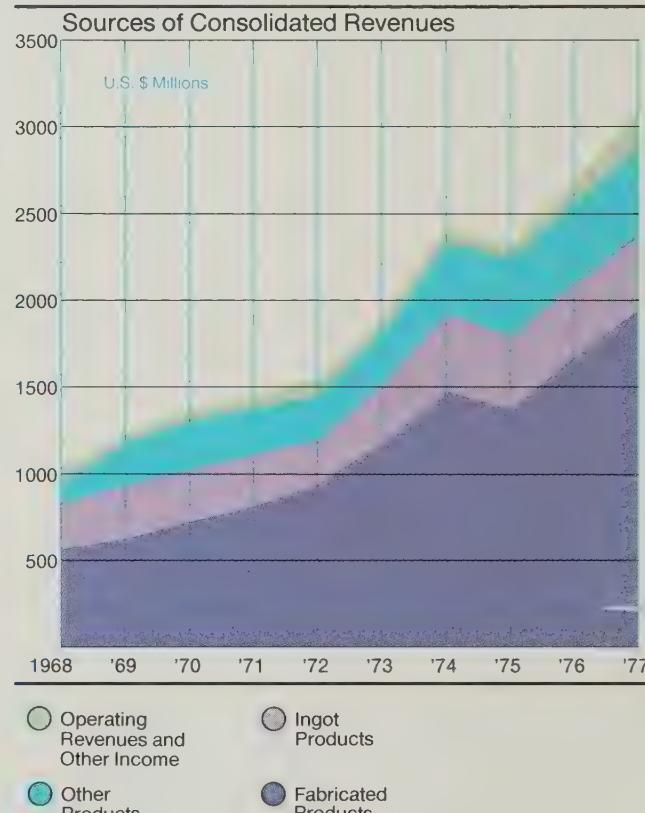
Geographical Breakdown of Net Income

Canada and the Caribbean earned \$94 million before preferred dividends compared to a loss of \$36 million in 1976, while the U.S. earned \$5 million compared to \$12 million in 1976.

Operations in Jamaica continued to incur losses in 1977 (although at a reduced rate) mainly because of the bauxite levy imposed by the Jamaican Government since 1974. Furthermore, during 1977, the Jamaican Government instituted a dual exchange rate system which precluded the aluminum industry from benefitting from the devaluation of the Jamaican dollar, which was applicable to other sectors of the economy.

Europe and Africa contributed \$61 million, compared to \$29 million, as a result of improved margins in both our principal operations in the UK and Germany as well as a higher contribution from equity companies. The performance of this region showed a strong first half in 1977 followed by a weaker second half, reflecting generally declining domestic demand as well as a reduction in inventories in customers' hands.

Latin America earned \$48 million in 1977 against \$41 million, mainly due to higher volume.



The performance of Asia and the South Pacific showed a notable improvement with earnings (before minority interests) of \$24 million in 1977 compared to \$2 million in 1976. This is attributable to an improvement in the results in Australia, Southeast Asia, and in Japan where Nippon Light Metal Company, Ltd reduced its losses but remains for the time being unprofitable. The steady improvement which was under way was arrested by the rapid increase in the value of the yen in the second half of the year, and the position of the industry in Japan remains very difficult.

From 1975 to 1977

1977 was the first year when Alcan's results reflected the world economic recovery which followed the recession of 1974-75. Although 1976 saw strong demand for aluminum products, the Company's earnings of \$44 million did not fully reflect the improvement in market conditions over 1975, because of the effects of the strike at the Québec smelters.

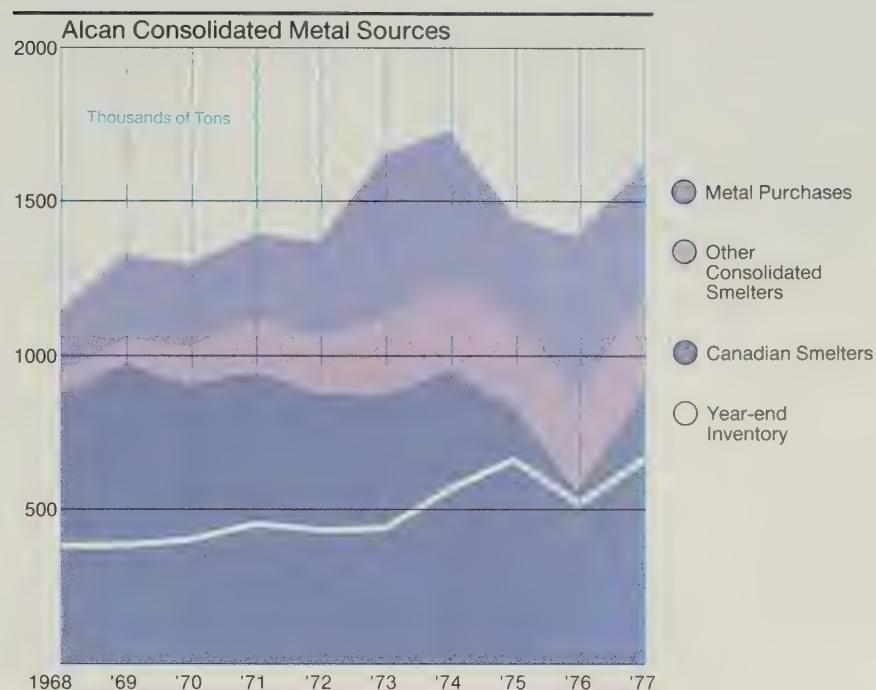
In the second half of 1976, however, Alcan's overseas operations, especially in Europe, improved dramatically from their depressed state in 1975. This improvement continued into 1977.

Tax Rate

The effective tax rate of Alcan for the last three years has been 39 per cent. Alcan's taxes are affected by differing tax rates in the various countries in which it operates, by taxes on intercompany dividends, and by the effect of investment or similar allowances. Non-taxable foreign exchange gains or losses which arise on translation also affect the tax rate, as do other non-taxable items. Investment tax credits in Canada and non-taxable foreign exchange gains had a particularly large impact on the tax rate of the last quarter of 1977.

Foreign Exchange

Had the Company adopted the U.S. Financial Accounting Standards Board recommendation to translate long-term debt at current rather than historical rates, it would have resulted in a \$20 million decrease in net income for 1977, largely due to the



strengthening of the pound, of the yen and of the Swiss franc and partially offset by the weakening of the Canadian dollar. However, since the funds borrowed are principally invested in assets generating a cash flow in the same currency, the unrealized



exchange adjustment on the debt is not reflected in the statement of income.

Inventories

Total inventories at the end of 1977 amounted to \$956 million compared to \$817 in 1976. This increase reflects primarily the decline in sales volume and, particularly during the second half of 1977, a weakening of demand for ingot products.

Financial Position

The issue of five million shares in June 1976, together with the high level of cash generation in 1977, have considerably strengthened the financial position of Alcan.

During 1977, the Company reduced medium and long-term borrowings by \$88 million. New financing included a successful Eurodollar debt issue by Alcan Australia Limited of \$25 million and a \$100 million floating rate issue of preferred shares by Aluminum Company of Canada, Ltd. The consolidated debt/equity ratio of the Company (defined as total debt versus shareholders' equity, plus minority interests) stood at 36/64 at year-end 1977 compared to 41/59 in 1976 and 48/52 in 1975. Furthermore, Alcan's debt burden is perhaps lower than it appears. Through the ownership of power assets in Canada and the UK, whose real value exceeds the total debt, Alcan's interest expense may be considered the equivalent of the long-term power

obligations of most other aluminum producers which are not reflected as debt.

Unfunded pension liabilities remain at a reasonable level. The increase in total unfunded liabilities of \$10 million in 1977 was occasioned principally by the augmentation of the pensions to retired employees to help offset the effects of inflation.

Capital Expenditures

During 1977, capital expenditures amounted to \$233 million compared to \$138 million in 1976 and \$208 million in 1975. Expenditures for the Canadian smelters amounted to \$65 million including some expenditures deferred from 1976 as well as new expenditures on the continuing program of improvement in environmental and technical standards. In Brazil, about \$35 million was required for the expansion of the Saramenha alumina plant and smelter, which will be completed in 1978.

During 1977, major projects were approved for Canada, Australia and Ireland. In Québec, the first stage of the Grande Baie smelter will cost an estimated \$200 million when completed in 1980. In Australia, a 25,000-ton smelter expansion is due for completion in 1980 at a cost of \$46 million, for which financing is complete.

In Ireland, Alcan will participate (40 per cent) in an alumina plant to be built at an estimated cost of over \$500 million. Construction finance will be obtained from the three participants' own resources, bank loans, export credit loans and grants from the Industrial Development Authority of Ireland.

For 1978, Alcan's total capital expenditures are expected to be around \$400 million.

Dividends

The improved financial results of the Company permitted the quarterly dividend to be increased to 20 cents per share in the first quarter and to 35 cents in the third quarter, giving a current annual rate of \$1.40. For the year 1977, dividends totalled \$1.10 per share. Under the Canadian Government's anti-inflation program, Alcan's dividend rate may not be increased beyond the current level until October 1978.

Quarterly Dividends and Market Price (NYSE)

| 1977 | Dividends Paid per Share | Market Price of Common Shares | |
|--------|--------------------------|-------------------------------|-----|
| | | High | Low |
| First | 0.20 | 27% | 23% |
| Second | 0.20 | 29½ | 25 |
| Third | 0.35 | 28 | 23½ |
| Fourth | 0.35 | 26½ | 21¼ |
| Year | 1.10 | | |
| <hr/> | | | |
| 1976 | | | |
| First | 0.10 | 28½ | 19¾ |
| Second | 0.10 | 30% | 25 |
| Third | 0.10 | 29 | 25¾ |
| Fourth | 0.10 | 26% | 20¼ |
| Year | 0.40 | | |

Information by Geographic Areas (U.S. \$ millions)

| | Canada and Caribbean | USA | Latin America | Europe and Africa | Asia and South Pacific | Elimin. and Minority Int. | Alcan Consol. |
|-------------------------------------|----------------------|-----|---------------|-------------------|------------------------|---------------------------|---------------|
| Year ending 31 December 1977 | | | | | | | |
| Sales and operating revenues | | | | | | | |
| To subsidiary companies | 656 | 61 | — | 15 | 53 | (785) | — |
| To other companies | 758 | 771 | 292 | 935 | 272 | — | 3,028 |
| Total | 1,414 | 832 | 292 | 950 | 325 | (785) | 3,028 |
| Net income | 94 | 5 | 48 | 61 | 24 | (30) | 202 |
| Capital expenditures | 111 | 21 | 42 | 44 | 15 | — | 233 |
| 31 December 1977 | | | | | | | |
| Current assets | 619 | 242 | 136 | 523 | 210 | (142) | 1,588 |
| Fixed assets (net) | 779 | 136 | 145 | 276 | 124 | — | 1,460 |
| Investments and other assets | 75 | 6 | 48 | 178 | 48 | — | 355 |
| Identifiable assets | 1,473 | 384 | 329 | 977 | 382 | (142) | 3,403 |
| Current and other liabilities | 256 | 115 | 75 | 324 | 105 | 126 | 1,001 |
| Capital employed | 1,217 | 269 | 254 | 653 | 277 | (268) | 2,402 |
| Number of employees (thousands) | 21.3 | 4.6 | 8.0 | 16.5 | 11.0 | — | 61.4 |
| Year ending 31 December 1976 | | | | | | | |
| Sales and operating revenues | | | | | | | |
| To subsidiary companies | 502 | 65 | — | 9 | 41 | (617) | — |
| To other companies | 639 | 647 | 264 | 825 | 281 | — | 2,656 |
| Total | 1,141 | 712 | 264 | 834 | 322 | (617) | 2,656 |
| Net income | (36) | 12 | 41 | 29 | 2 | (4) | 44 |
| Capital expenditures | 62 | 13 | 31 | 24 | 8 | — | 138 |
| 31 December 1976 | | | | | | | |
| Current assets | 572 | 227 | 131 | 423 | 154 | (138) | 1,369 |
| Fixed assets (net) | 751 | 132 | 122 | 271 | 125 | — | 1,401 |
| Investments and other assets | 78 | 5 | 39 | 154 | 45 | — | 321 |
| Identifiable assets | 1,401 | 364 | 292 | 848 | 324 | (138) | 3,091 |
| Current and other liabilities | 293 | 97 | 76 | 253 | 80 | 36 | 835 |
| Capital employed | 1,108 | 267 | 216 | 595 | 244 | (174) | 2,256 |
| Number of employees (thousands) | 21.0 | 4.3 | 7.9 | 16.0 | 10.6 | — | 59.8 |

Sales to subsidiary companies are made at a fair market price recognizing volume, continuity of supply and other factors.
 Net income is total revenues less expenses directly related to the geographic area in accordance with generally accepted accounting principles.

Capital employed represents the total book value of the net assets located in each area.

Of the Canada and Caribbean sales, \$793 million in 1977 (\$622 in 1976) were export sales from Canada, principally to the United States.

Consolidated Sales of Aluminum by Markets (thousands of tons)

| | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---------------|-------|-------|-------|-------|-------|-------|-------|
| Canada | 189 | 195 | 235 | 248 | 215 | 232 | 242 |
| USA | 387 | 416 | 480 | 452 | 325 | 388 | 412 |
| UK | 186 | 210 | 265 | 287 | 220 | 230 | 190 |
| EEC (less UK) | 148 | 172 | 208 | 207 | 164 | 220 | 212 |
| Latin America | 93 | 111 | 113 | 124 | 121 | 127 | 128 |
| All Others | 395 | 347 | 375 | 344 | 357 | 318 | 269 |
| | 1,398 | 1,451 | 1,676 | 1,662 | 1,402 | 1,515 | 1,453 |

Auditors' report

To the Shareholders of
Alcan Aluminium Limited:

We have examined the consolidated balance sheets of Alcan Aluminium Limited as at 31 December 1977 and 1976 and the related consolidated statements of income, retained earnings, and changes in financial position for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and accordingly included such tests of accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion these financial statements present fairly the consolidated financial position of the Company as at 31 December 1977 and 1976 and the results of its operations and the changes in its financial position for the years then ended, in accordance with generally accepted accounting principles in Canada, applied on a consistent basis.

Montréal, Canada
2 February 1978

PRICE WATERHOUSE & Co.
Chartered Accountants

Consolidated Statement of Income

| year ending 31 December (in thousands of U.S. dollars) | 1977 | 1976 |
|--|-------------------|------------------|
| Revenues | | |
| Sales | \$ 2,876,211 | \$ 2,558,293 |
| Operating revenues | 152,190 | 97,779 |
| Other income (note 9) | 29,807 | 14,684 |
| | 3,058,208 | 2,670,756 |
| Costs and expenses | | |
| Cost of sales and operating expenses | 2,276,427 | 2,154,669 |
| Depreciation and depletion | 125,557 | 115,621 |
| Selling, research and administrative expenses | 215,262 | 195,494 |
| Interest on debt not maturing within one year | 73,727 | 81,064 |
| Other interest | 15,858 | 19,131 |
| Other expenses | 14,609 | 8,379 |
| | 2,721,440 | 2,574,358 |
| Income before income taxes and other items | 336,768 | 96,398 |
| Income taxes (note 10) | | |
| Current | 54,614 | 60,079 |
| Deferred | 77,660 | (22,719) |
| | 132,274 | 37,360 |
| Income before other items | 204,494 | 59,038 |
| Equity income | 12,967 | (5,003) |
| Minority interests | (15,955) | (10,028) |
| Net income (note 1) | \$ 201,506 | \$ 44,007 |

in U.S. dollars

| | | |
|-----------------------------------|----------------|----------------|
| Income per common share | \$ 4.98 | \$ 1.14 |
| Dividends per common share | 1.10 | 0.40 |

Consolidated Balance Sheet

Assets

| | 31 December (in thousands of U.S. dollars) | 1977 | 1976 |
|---|--|---------------------|------|
| <hr/> | | | |
| Current assets | | | |
| Cash and time deposits | \$ 106,016 | \$ 57,900 | |
| Receivables | 526,459 | 494,061 | |
| Aluminum | 577,852 | 445,549 | |
| Raw materials and other supplies | 378,107 | 371,148 | |
| | 1,588,434 | 1,368,658 | |
| <hr/> | | | |
| Deferred charges | 36,100 | 34,031 | |
| Deferred receivables (note 5) | 76,889 | 80,114 | |
| Investments in companies owned 50% or less (note 2) | 241,608 | 206,880 | |
| Property, plant and equipment (note 3) | 3,150,249 | 2,996,689 | |
| Less: Accumulated depreciation and depletion | 1,690,199 | 1,596,133 | |
| | 1,460,050 | 1,400,556 | |
| <hr/> | | | |
| Total assets | \$ 3,403,081 | \$ 3,090,239 | |

Consolidated Balance Sheet

Liabilities and Shareholders' Equity

| 31 December (in thousands of U.S. dollars) | 1977 | 1976 |
|---|---------------------|---------------------|
| Current liabilities | | |
| Payables | \$ 400,689 | \$ 357,306 |
| Short-term borrowings (principally from banks) | 154,750 | 123,491 |
| Income and other taxes | 72,440 | 74,496 |
| Debt maturing within one year (note 4) | 51,283 | 39,667 |
| | 679,162 | 594,960 |
| Debt not maturing within one year (note 4) | 748,599 | 837,187 |
| Deferred credits | 78,724 | 76,579 |
| Deferred income taxes | 226,599 | 148,746 |
| Minority interests (note 6) | 243,548 | 163,163 |
| Shareholders' equity | | |
| Preferred shares, par Can. \$40 (note 7) | | |
| Outstanding — 54,029 shares (1976—56,309) | 2,004 | 2,088 |
| Common shares, without nominal or par value | | |
| Authorized — 60,000,000 shares | | |
| Outstanding — 40,446,694 shares | 426,905 | 426,905 |
| Retained earnings (note 8) | 997,540 | 840,611 |
| | 1,426,449 | 1,269,604 |
| Total liabilities and shareholders' equity | \$ 3,403,081 | \$ 3,090,239 |

Approved by the Board:
 Nathanael V. Davis, Director
 John H. Hale, Director

Consolidated Statement of Changes in Financial Position

| year ending 31 December (in thousands of U.S. dollars) | 1977 | 1976 |
|--|-------------------|-------------------|
| Source of funds | | |
| Income after taxes | \$ 204,494 | \$ 59,038 |
| Depreciation and depletion | 125,557 | 115,621 |
| Deferred income taxes | 77,660 | (22,719) |
| Other | (8,568) | (1,990) |
| From operations | 399,143 | 149,950 |
| Common shares | — | 129,132 |
| Preferred shares of a subsidiary company | 100,000 | — |
| New debt | 73,919 | 110,109 |
| Disposals of plant and equipment | 14,344 | 5,458 |
| Sale of investments | 1,327 | 744 |
| Other (net) | — | 11,322 |
| | 588,733 | 406,715 |
| Application of funds | | |
| Plant and equipment | 217,750 | 126,457 |
| Investments | 15,020 | 11,578 |
| Debt repayments | 161,722 | 245,485 |
| Dividends | 44,577 | 15,274 |
| Other (net) | 14,090 | — |
| | 453,159 | 398,794 |
| Increase in working capital (note 15) | 135,574 | 7,921 |
| Working capital — beginning of year | 773,698 | 765,777 |
| Working capital — end of year | \$ 909,272 | \$ 773,698 |

Consolidated Statement of Retained Earnings

| | | |
|---|-------------------|-------------------|
| Retained earnings — beginning of year | \$ 840,611 | \$ 818,171 |
| Net income | 201,506 | 44,007 |
| | 1,042,117 | 862,178 |
| Underwriting commissions and expenses of issue of common shares | — | 6,293 |
| Dividends on preferred shares | 86 | 102 |
| Dividends on common shares | 44,491 | 15,172 |
| | 44,577 | 21,567 |
| Retained earnings — end of year (note 8) | \$ 997,540 | \$ 840,611 |

Notes to Financial Statements

in millions of U.S. dollars

1. Summary of accounting policies

Principles of consolidation

The consolidated financial statements include the accounts of all companies more than 50% owned. In addition, under the equity accounting principle, consolidated net income includes Alcan's equity in the net income or losses of all companies 20-50% owned and the investments in these companies have been increased by Alcan's share of their undistributed net income since acquisition. When the cost of an investment differs from the book value of Alcan's equity therein at date of acquisition, the difference is amortized over the estimated useful life of the related fixed assets. Intercompany items and transactions between consolidated companies, including profits in inventories, are eliminated.

Translation of accounts into United States dollars

The consolidated financial statements are expressed in U.S. dollars since this is the principal currency of international trade in which Alcan's business is mainly involved.

Accounts included in the consolidated statement of income, except depreciation and depletion, are translated at average rates of exchange prevailing during the year. Accounts included in the consolidated balance sheet are translated at rates of exchange at year end except that (a) inventories, investments, fixed assets and accumulated depreciation and depletion are at rates at dates of acquisition, (b) deferred income taxes are at rates at dates of origin, and (c) debts not maturing within one year and capital stock are at rates at dates of issue. Translation adjustments are included in income.

The Financial Accounting Standards Board in the United States requires that companies reporting to investors in the United States adopt the practice of translating long-term debt at current rates of exchange. However, as Alcan's borrowings in currencies other than U.S. dollars have for the most part been invested in the country of the borrowing and will be repaid out of funds generated in the same currency, Alcan believes that it could be misleading and cause violent fluctuations in reported earnings to recognize immediately translation gains or losses which arise from changes in exchange rates. Accordingly, Alcan has not adopted the current rate method but has continued to follow its policy of translating such debt at historic rates, an accounting practice which is generally accepted in Canada. The following table compares reported net income with the net income that would have been reported using the FASB current rate method, and also shows the cumulative effect on retained earnings.

| | 1977 | | 1976 | |
|---------------------------------------|-------------|---------------------|-------------|---------------------|
| | As Reported | Current Rate Method | As Reported | Current Rate Method |
| Consolidated net income | | | | |
| First quarter (unaudited) | \$ 35.5 | \$ 41.0 | \$ 4.5 | \$ 5.2 |
| Second quarter (unaudited) | 49.7 | 37.9 | 6.1 | 13.1 |
| Third quarter (unaudited) | 53.6 | 52.4 | 10.4 | 2.9 |
| Fourth quarter (unaudited) | 62.7 | 50.5 | 23.0 | 29.9 |
| | \$ 201.5 | \$ 181.8 | \$ 44.0 | \$ 51.1 |
| Dollars per common share | 4.98 | 4.49 | 1.14 | 1.33 |
| Consolidated retained earnings | | | | |
| Beginning of year | \$ 840.6 | \$ 826.9 | \$ 818.2 | \$ 797.4 |
| End of year | 997.5 | 964.1 | 840.6 | 826.9 |

Deferred income taxes

Income tax regulations in Canada and certain other countries permit the deduction from taxable income of certain items (principally depreciation) in amounts which do not coincide with those charged for financial reporting purposes. The effect of such timing differences on income taxes otherwise payable is recognized as deferred income taxes.

Notes to Financial Statements in millions of U.S. dollars

1. Summary of accounting policies (Continued)

Inventories

Aluminum, raw materials and other supplies are stated at cost or net realizable value, whichever is the lower. The cost of inventories other than those in the United States is determined for the most part on the monthly average method. The cost of inventories in the United States, amounting to \$119 million, is determined by the last-in-first-out method, which is permitted for income tax purposes. Had such inventories been valued on the monthly average method, the value would have been \$70 million higher.

Other

Property, plant and equipment includes the cost of renewals and betterments. Repairs and maintenance are charged against income as incurred.

Depreciation is calculated on the straight-line method using rates based on the estimated useful lives of the respective assets. Depletion, not significant in amount, is calculated on the unit of production basis.

Income per common share is calculated by dividing net income less preferred dividends by the average number of shares outstanding during the relevant period (1977: 40,446,694; 1976: 1st Quarter, 35,390,272; 2nd, 35,446,694; 3rd, 39,196,694; 4th, 40,446,694).

| 2. Investments in companies owned 50% or less | 1977 | 1976 |
|--|--------|--------|
| At cost plus equity in undistributed net income since acquisition | | |
| Companies 50% owned (cost \$53 million) | \$ 60 | \$ 61 |
| Companies 20% to 50% owned (cost \$136 million) | 178 | 142 |
| At cost | | |
| Companies less than 20% owned | 4 | 4 |
| | <hr/> | <hr/> |
| | \$ 242 | \$ 207 |

The results of operations and the financial position of the 20-50% owned companies, located mainly in Australia, Germany, Guinea, Japan and Norway, are summarized below.

| Results of operations for the year | 1977 | 1976 |
|--|----------|----------|
| Revenues | \$ 3,299 | \$ 2,943 |
| Costs and expenses | 3,217 | 2,935 |
| Income before income taxes | 82 | 8 |
| Income taxes | 26 | 3 |
| Net income | \$ 56 | \$ 5 |
| *Alcan's share of net income (loss) | 15 | (4) |
| Dividends received by Alcan | 3 | 3 |
| Financial position at 31 December | | |
| Working capital | \$ 780 | \$ 658 |
| Property, plant and equipment (net) | 1,663 | 1,514 |
| Other assets (net) | 364 | 314 |
| | <hr/> | <hr/> |
| Less: Debt not maturing within one year | 2,807 | 2,486 |
| Deferred taxes | 1,840 | 1,680 |
| | <hr/> | <hr/> |
| Net assets | 64 | 62 |
| | <hr/> | <hr/> |
| **Alcan's equity in net assets | \$ 903 | \$ 744 |
| | <hr/> | <hr/> |

*Where a company operates as a joint venture supplying materials to each participant, Alcan's share of the net income is applied to the cost of the materials so obtained.

**If debt not maturing within one year of companies 20-50% owned was translated into U.S. dollars at year-end rates of exchange, Alcan's equity in net assets of such companies would be reduced by \$37 million.

3. Property, plant and equipment

| | 1977 | | | 1976 |
|--|-----------------|-----------------|-----------------|-----------------|
| | Cost | Acc. Dep. | Net | Net |
| Land, and water rights | \$ 64 | \$ 1 | \$ 63 | \$ 64 |
| Mineral properties, rights and development | 20 | 9 | 11 | 11 |
| Raw material, power and other facilities | 1,100 | 679 | 421 | 427 |
| Smelting facilities | 1,050 | 572 | 478 | 435 |
| Fabricating facilities | 916 | 429 | 487 | 464 |
| | \$ 3,150 | \$ 1,690 | \$ 1,460 | \$ 1,401 |

Expenditures in 1978 are expected to be approximately \$400 million.

4. Debt not maturing within one year

| | 1977 | 1976 |
|--|---------------|---------------|
| Aluminum Company of Canada, Ltd | | |
| *Bank loans under \$200 million revolving credit agreement | \$ — | \$ 50 |
| 9½% Sinking fund debentures, due 1995 | 100 | 100 |
| 10¾% Sinking fund debentures, due 1994 (Can. \$75 million) | 77 | 77 |
| 9¾% Sinking fund debentures, due 1991 (Can. \$55 million) | 55 | 56 |
| 4½% Sinking fund debentures, due 1980 | 7 | 12 |
| 7½% Serial debentures, due 1978/1979 (Can. \$20 million) | 20 | 30 |
| 9½% Debentures, due 1988 | 50 | 50 |
| 5.10% Notes, due 1978/1992 | 68 | 72 |
| Other debt, due 1978/2001 | 12 | 10 |
| Alcan Aluminum Corporation (USA) | | |
| 9½% Notes, due 1980/1994 | 45 | 45 |
| 4¾% Notes, due 1978/1984 | 24 | 27 |
| Other debt, due 1978/1990 | 3 | 5 |
| Alcan Aluminium (UK) Limited and subsidiary companies | | |
| *Loan, due 1979 (£15 million) | 36 | 36 |
| 9% Loan stock, due 1981/1994 (£9 million) | 21 | 22 |
| 10½% Loan stock, due 1981/1994 (£8 million) | 19 | 19 |
| *Bank loans, due 1978/1982 (£13 million) | 29 | 33 |
| Other debt, due 1978/2004 (£9 million) | 21 | 21 |
| Alcan Europe N.V. and subsidiary companies | | |
| 5½% Bonds, due 1987 (Sw. F. 100 million) | 26 | 26 |
| *Bank loans, due 1978/1992 | 33 | 36 |
| Other debt, due 1978/1994 | 4 | 3 |
| Alcan Jamaica Limited | | |
| **Bank loans, due 1980/1983 | 44 | 44 |
| Alcan Australia Limited and subsidiary companies | | |
| Debentures due 1978/1996 (principally A\$) | 25 | 25 |
| 8½% Bonds due 1989 | 25 | — |
| Other companies | | |
| *Bank loans, due 1978/1984 | 25 | 37 |
| Debentures and notes, due 1978/1987 | 35 | 44 |
| | 804 | 880 |
| Less: Debt maturing within one year included in current liabilities (equivalent to \$51 million and \$40 respectively, at year-end rates of exchange) | 55 | 43 |
| | \$ 749 | \$ 837 |

*Interest fluctuates with lender's prime commercial rate.

**Interest is related to the London Interbank offered rate.

Notes to Financial Statements in millions of U.S. dollars

4. Debt not maturing within one year (Continued)

After allowing for prepayments, sinking fund and other requirements over the next five years amount to \$55 million in 1978, \$82 in 1979, \$59 in 1980, \$53 in 1981 and \$63 in 1982.

If translated into United States dollars at year-end rates of exchange, debt not maturing within one year at 31 December 1977 would decrease by \$4 million and, if there were no further changes in exchange rates, this amount would be credited to income as the debt matures.

5. Deferred receivables

Deferred receivables include \$42 million due from the Government of Guyana over the period 1979 to 1991 in respect of the nationalization in 1971 of Alcan's bauxite and alumina assets. This amount bears interest at 6% per annum.

6. Minority interests in subsidiary companies

| | 1977 | 1976 |
|-------------------|--------|--------|
| *Preferred shares | \$ 182 | \$ 84 |
| Common shares | 38 | 46 |
| Retained earnings | 24 | 33 |
| | <hr/> | <hr/> |
| | \$ 244 | \$ 163 |

*Includes \$172 million of Aluminum Company of Canada, Ltd of which \$100 million is floating rate preferred shares redeemable at par at the option of the holder in 1984, 1985, and 1986.

7. Alcan preferred shares

The number of 4 1/4% cumulative redeemable convertible preferred shares originally authorized and issued was 1,500,000 of which 1,404,289 were exchanged for an equal number of common shares prior to the expiration of the conversion privilege in 1973 and 41,682 were subsequently purchased on the open market (1977: 2,280, 1976: 6,093). The outstanding preferred shares are subject to redemption in whole or in part at any time at the option of the Board of directors on thirty days' notice at Can. \$43 per share.

8. Retained earnings

Consolidated retained earnings at 31 December 1977 include \$148 million which, pursuant to the provisions of certain debt and share issues of Aluminum Company of Canada, Ltd, is not distributable as dividends either in cash or in kind to Alcan, the holder of its common shares.

Consolidated retained earnings at 31 December 1977 also include about \$415 million, some part of which may be subject to certain taxes on distribution to the parent company. No provision has been made for such taxes because these earnings are reinvested in the business.

9. Other income

| | 1977 | 1976 |
|----------------------------|---------|---------|
| Interest | \$ 18.0 | \$ 9.8 |
| Gain on redemption of debt | 6.8 | 3.0 |
| Other | 5.0 | 1.9 |
| | <hr/> | <hr/> |
| | \$ 29.8 | \$ 14.7 |

10. Income taxes

Income taxes provided in 1977 represent approximately 39% of consolidated pre-tax income, an effective rate lower than statutory rates in Canada. The reduction is attributable to different tax rates in other countries, to investment and other special allowances, and to non-taxable income and losses.

11. Commitments and guarantees

As a participant in a long-term cost-sharing joint venture, Alcan is required to pay its share of operating costs of facilities and costs of servicing long-term debt of Queensland Alumina Limited (Australia). The fixed portion of this commitment amounts to \$11.3 million in 1978, \$10.7 in 1979, \$10.2 in 1980, \$10.5 in 1981, \$10.4 in 1982 and lesser annual amounts up to 1992. In addition Alcan is guarantor of \$84.9 million of long-term debt of certain related companies including \$69.7 of Compagnie des Bauxites de Guinée.

Minimum rental commitments amount to \$21.2 million in 1978, \$16.7 in 1979, \$13.6 in 1980, \$9.7 in 1981, \$7.7 in 1982 and lesser annual amounts thereafter. Total rental expense amounted to \$60 million in 1977 (\$54 in 1976).

See also reference to capital expenditures in Note 3 and debt repayments in Note 4.

12. Pension plans

The Company and its subsidiaries (with some exceptions) have established pension plans in the principal countries where they operate, for the greater part contributory and generally open to all employees. The total pension expense in 1977 was \$37 million (\$34 in 1976) which includes, as to certain of the plans, amortization of unfunded actuarial liabilities which the Company and its subsidiaries are funding, for the most part over a period of 15 years. Based on the most recent actuarial reports, the unfunded actuarial liabilities amounted to \$13 million for currently vested benefits and to \$105 million for total benefits.

13. Remuneration of directors and officers

The remuneration paid in 1977 by the Company to the 15 directors and to past directors amounted to \$80,631 (\$69,002 in 1976). The remuneration paid in 1977 to the 12 officers (six of whom were also directors) and to past officers amounted to \$2,315,787 (\$1,609,073 in 1976) of which \$2,072,452 was absorbed by the Company, \$98,490 by Aluminum Company of Canada, Ltd and \$144,845 by two management subsidiaries.

14. Quarterly financial data (unaudited)

| | 1977 | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| Revenues | \$ 741.5 | \$ 790.5 | \$ 745.5 | \$ 780.7 |
| Costs and expenses | 668.2 | 704.1 | 654.2 | 694.9 |
| Income taxes | 36.0 | 37.0 | 38.3 | 21.0 |
| Equity income and minority interests | (1.8) | 0.3 | 0.6 | (2.1) |
| Net income | \$ 35.5 | \$ 49.7 | \$ 53.6 | \$ 62.7 |
| Income per common share (U.S. \$) | 0.88 | 1.23 | 1.32 | 1.55 |
| | 1976 | | | |
| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter |
| Revenues | \$ 604.8 | \$ 704.9 | \$ 650.8 | \$ 710.3 |
| Costs and expenses | 578.6 | 669.7 | 637.9 | 688.2 |
| Income taxes | 13.0 | 23.1 | (2.2) | 3.5 |
| Equity income and minority interests | (8.7) | (6.0) | (4.7) | 4.4 |
| Net income | \$ 4.5 | \$ 6.1 | \$ 10.4 | \$ 23.0 |
| Income per common share (U.S. \$) | 0.13 | 0.17 | 0.27 | 0.57 |

15. Changes in working capital

| | 1977 | 1976 |
|--|-----------------|---------------|
| Current assets | | |
| Cash and time deposits | \$ 48.1 | \$ (1.3) |
| Receivables | 32.4 | 75.2 |
| Aluminum, raw materials and other supplies | 139.3 | (16.0) |
| | 219.8 | 57.9 |
| Current liabilities | | |
| Payables and short-term borrowings | 74.7 | 24.2 |
| Income and other taxes | (2.1) | 27.1 |
| Debt maturing within one year | 11.6 | (1.3) |
| | 84.2 | 50.0 |
| Net increase | \$ 135.6 | \$ 7.9 |

16. Information by geographic areas

Financial information by geographic areas is contained in the summary on page 29.

17. Replacement cost data (unaudited)

The information required to be disclosed by the United States Securities and Exchange Commission is contained in the section 'Inflation Accounting' commencing on page 40.

Inflation Accounting

The controversy surrounding inflation accounting has continued during 1977, but still remains unresolved. Caution has prevailed over speed in Canada, the United Kingdom and Australia. Proposed current cost accounting systems in the latter two countries have been set aside pending further investigation.

In the United States, the Securities and Exchange Commission requires from larger companies the estimated current replacement cost of productive capacity and inventories with depreciation and cost of sales based upon those amounts. Also, the Financial Accounting Standards Board is studying the broader aspects of inflation accounting.

Alcan believes it is helpful to provide the replacement cost information in the form of a consolidated balance sheet and income statement. The latter is only carried to the stage of 'income before income tax' because no method of accounting for tax is agreed under these circumstances.

A credit is taken in the net income statement for the gain on net monetary liabilities which arises from the decline in value of the currencies. Since current interest rates reflect inflation (i.e., the 'real' interest rates would be much lower) and are charged against operations, it seems correct to credit the offsetting gain arising from the reduced real value of the liability.

Alcan's major subsidiaries have reviewed their assets in detail and computed the replacement cost for the most part by valuing specific assets or operating capacities. Suitable indexes were used to value the other assets and those of the remaining smaller subsidiaries.

In general the replacement costs for the major alumina, power and aluminum smelter facilities have been developed through engineering estimates of cost per unit of capacity, incorporating appropriate technological improvements, and multiplied by the existing capacity to arrive at the estimated total replacement cost.

There has been no attempt to re-engineer the entire productive capacity nor to consider the many and varied problems of relocation and consolidation of existing facilities, such as sources of raw materials, labour supply and nearness to customers. The cost and manner of replacement might be significantly changed by such considerations.

The present level of operating costs would be

changed through greater efficiencies in the use of labour and materials afforded by productive capacity of more modern design. These changes cannot be determined with any precision. However, Alcan believes they would significantly offset the additional depreciation on the replacement cost basis.

The accumulated depreciation estimate is based upon the relationship of expired lives to total lives of the existing facilities, applied to the estimated replacement cost of the productive capacity. There has been no attempt to re-estimate the useful lives of the fixed assets for purposes of calculating annual depreciation and accumulated depreciation reserve.

The annual depreciation charge based on replacement values is calculated on the straight-line method, using the historical-cost depreciation rates for existing facilities, applied to the average of the estimated replacement cost of productive capacity as at the beginning and at the end of the year.

The replacement cost of sales is determined by adjusting historical costs for the inflation occurring during the period between production and sale.

Replacement values for locations outside the United States have been compiled initially in local currencies and translated into U.S. dollars at year-end exchange rates for productive capacity and inventories, and at average rates during the year for cost of sales and depreciation expense.

The 1976 replacement cost figures have been adjusted from those reported last year to recognize more detailed engineering studies of the replacement cost of some facilities. However, it should be noted that the replacement cost method does not call for restatement of the 1976 amounts in terms of 1977 dollars and therefore does not permit a direct comparison.

Because of the many subjective judgments, lack of established standards and continuing experimentation, Alcan feels that the replacement cost figures provide only a general indication of the values involved and that comparisons with other reported data are unlikely to be valid. Alcan would prefer to see a method which revalues in current dollars the assets which the Company actually owns.

The search for the most appropriate inflation accounting system continues both within the Company and in outside bodies in many countries.

Inflation accounting

Consolidated Balance Sheet

| 31 December (in millions of U.S. dollars) | 1977 | | 1976 | |
|---|--|--------------------------|--|--------------------------|
| | Estimated Replacement Cost Basis | Historical Cost Basis | Estimated Replacement Cost Basis (b) | Historical Cost Basis |
| Current assets | | | | |
| Inventories | \$ 1,074 | \$ 956 | \$ 923 | \$ 817 |
| Other | 632 | 632 | 552 | 552 |
| Property, plant and equipment (a) | 8,303 | 3,150 | 7,860 | 2,997 |
| Less: Accumulated depreciation and depletion | (4,877) | (1,690) | (4,697) | (1,596) |
| Other assets | 355 | 355 | 320 | 320 |
| Total assets | \$ 5,487 | \$ 3,403 | \$ 4,958 | \$ 3,090 |
| Current liabilities | | | | |
| Debt not maturing within one year | \$ 679 | \$ 679 | \$ 595 | \$ 595 |
| Deferred income taxes and credits | 749 | 749 | 837 | 837 |
| Minority interests | 305 | 305 | 225 | 225 |
| Shareholders' equity | 287 | 244 | 207 | 163 |
| Share capital | 429 | 429 | 429 | 429 |
| Retained earnings | 997 | 997 | 841 | 841 |
| Replacement reserve | 2,041 | | 1,824 | |
| Total liabilities and shareholders' equity | \$ 5,487 | \$ 3,403 | \$ 4,958 | \$ 3,090 |

Consolidated Statement of Income

| Year ending 31 December (in millions of U.S. dollars) | 1977 | | 1976 | |
|---|--|--------------------------|--|--------------------------|
| | Estimated Replacement Cost Basis | Historical Cost Basis | Estimated Replacement Cost Basis (b) | Historical Cost Basis |
| Revenues | \$ 3,058 | \$ 3,058 | \$ 2,671 | \$ 2,671 |
| Costs and expenses | | | | |
| Cost of sales and operating expenses | 2,314 | 2,276 | 2,198 | 2,155 |
| Depreciation and depletion | 304 | 126 | 299 | 116 |
| Other | 319 | 319 | 304 | 304 |
| | 121 | 337 | (130) | 96 |
| Gain from holding net monetary liabilities | 60 | — | 54 | — |
| Income before income taxes | \$ 181 | \$ 337 | \$ (76) | \$ 96 |

(a) Land, water rights and mineral properties have not been revalued and are included in the estimated replacement cost at their historical cost of \$84 million (\$83 million in 1976). Accumulated amortization and depletion relating to these assets of \$10 million (\$8 million in 1976) also have not been revalued.

(b) Adjusted to recognize more detailed engineering studies of some facilities.

A Ten-Year Summary

(Adjusted to give effect to changes in accounting practices)

| | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Operating Data (thousands of tons) | | | | | | | | | | |
| Aluminum shipments by consolidated subsidiaries | 1,220 | 1,363 | 1,346 | 1,398 | 1,451 | 1,676 | 1,662 | 1,402 | 1,515 | 1,453 |
| Ingot and ingot products | 614 | 742 | 655 | 626 | 592 | 663 | 644 | 617 | 562 | 485 |
| Fabricated products | 606 | 621 | 691 | 772 | 859 | 1,013 | 1,018 | 785 | 953 | 968 |
| Production of primary aluminum | 873 | 969 | 903 | 945 | 880 | 872 | 963 | 838 | 543 | 861 |
| Canada — own production | — | — | — | — | — | — | — | — | — | 50 |
| Canada — tolling for a related company | 585 | 720 | 849 | 935 | 981 | 1,146 | 1,211 | 1,178 | 1,130 | 1,156 |
| Fabricated products shipments by all subsidiary and related companies | 800 | 862 | 937 | 1,033 | 1,177 | 1,376 | 1,417 | 1,128 | 1,440 | 1,483 |
| Consolidated Income Statement Items (U.S. \$ millions) | | | | | | | | | | |
| Revenues | | | | | | | | | | |
| Total revenues | 1,022 | 1,239 | 1,374 | 1,441 | 1,529 | 1,891 | 2,427 | 2,313 | 2,671 | 3,058 |
| Sales of aluminum ingot and ingot products | 271 | 342 | 321 | 284 | 267 | 318 | 448 | 441 | 432 | 448 |
| Sales of aluminum fabricated products | 560 | 611 | 723 | 821 | 922 | 1,191 | 1,489 | 1,355 | 1,674 | 1,942 |
| Sales of all other products | 127 | 224 | 268 | 277 | 266 | 306 | 400 | 419 | 452 | 486 |
| Operating revenues | 49 | 48 | 52 | 49 | 56 | 57 | 75 | 87 | 98 | 152 |
| Other income | 15 | 14 | 10 | 10 | 18 | 19 | 15 | 11 | 15 | 30 |
| Costs and expenses | | | | | | | | | | |
| Cost of sales and operating expenses | 685 | 864 | 988 | 1,062 | 1,161 | 1,452 | 1,824 | 1,840 | 2,155 | 2,276 |
| Depreciation and depletion | 91 | 83 | 94 | 98 | 94 | 101 | 103 | 111 | 116 | 126 |
| Interest charges | 39 | 50 | 60 | 64 | 69 | 79 | 100 | 105 | 100 | 90 |
| All other expenses (except income taxes) | 79 | 99 | 113 | 123 | 126 | 148 | 175 | 187 | 204 | 229 |
| Income taxes | 59 | 65 | 54 | 38 | 20 | 35 | 85 | 27 | 37 | 132 |
| Equity income | 7 | 11 | 11 | 9 | 8 | 18 | 11 | (13) | (5) | 13 |
| Minority interests | (3) | (4) | (4) | (5) | (6) | (11) | (9) | (7) | (10) | (16) |
| Extraordinary gains | — | — | 9 | — | — | — | 27 | 12 | — | — |
| Net income | 73 | 85 | 81 | 60 | 61 | 83 | 169 | 35 | 44 | 202 |
| Consolidated Balance Sheet Items (U.S. \$ millions) | | | | | | | | | | |
| Working capital | 323 | 384 | 444 | 401 | 468 | 442 | 641 | 766 | 774 | 909 |
| Property, plant and equipment (net) | 1,085 | 1,130 | 1,223 | 1,224 | 1,234 | 1,217 | 1,329 | 1,385 | 1,401 | 1,460 |
| Investments in companies owned 50% or less | 157 | 177 | 170 | 174 | 178 | 199 | 212 | 215 | 207 | 242 |
| Long-term debt | 608 | 668 | 751 | 740 | 798 | 744 | 881 | 971 | 837 | 749 |
| Deferred income taxes | 148 | 144 | 150 | 142 | 130 | 123 | 161 | 166 | 149 | 227 |
| Minority interests | 84 | 92 | 112 | 114 | 114 | 106 | 116 | 163 | 163 | 244 |
| Shareholders' equity | 747 | 808 | 847 | 872 | 904 | 957 | 1,093 | 1,112 | 1,270 | 1,426 |
| Total assets | 1,867 | 2,047 | 2,215 | 2,297 | 2,370 | 2,449 | 2,979 | 3,012 | 3,090 | 3,403 |
| Per Common Share (U.S. \$) | | | | | | | | | | |
| Income (after preferred dividends but before extraordinary gains) | 2.17 | 2.52 | 2.11 | 1.75 | 1.78 | 2.42 | 4.11 | 0.65 | 1.14 | 4.98 |
| Extraordinary gains | — | — | 0.27 | — | — | — | 0.79 | 0.36 | — | — |
| Income (after preferred dividends) | 2.17 | 2.52 | 2.38 | 1.75 | 1.78 | 2.42 | 4.90 | 1.01 | 1.14 | 4.98 |
| Dividends paid | 1.02 | 1.12 | 1.20 | 1.00 | 0.80 | 0.90 | 1.20 | 0.90 | 0.40 | 1.10 |
| Book value | 21.42 | 22.85 | 24.03 | 24.78 | 25.76 | 27.71 | 31.41 | 31.36 | 31.34 | 35.22 |
| Other Statistics | | | | | | | | | | |
| Capital expenditures (net of government development grants — U.S. \$ millions) | 139 | 147 | 152 | 155 | 115 | 117 | 268 | 208 | 138 | 233 |
| Funds generated from operations (U.S. \$ millions) | 148 | 160 | 164 | 155 | 140 | 163 | 275 | 156 | 150 | 399 |
| Return on average equity (as a percentage) | 10.0 | 11.0 | 9.8 | 7.0 | 6.9 | 8.9 | 16.5 | 3.2 | 3.7 | 14.9 |
| Number of common shareholders at year end (thousands) | 73 | 72 | 76 | 70 | 64 | 50 | 48 | 47 | 43 | 40 |
| Number of employees at year end (thousands) | 61 | 62 | 67 | 61 | 62 | 62 | 64 | 61 | 60 | 61 |

Principal Subsidiary and Related Companies

At 31 December 1977 — Fully owned unless the percentage of ownership is shown

Operating Companies

North America

Canada

Aluminum Company of Canada, Ltd
Alcan Canada Products Limited
Alcan Smelters and Chemicals Ltd
Alcan-Price Extrusions Limited (50%)
Alasco (1974) Inc.
Revalex Inc. (75%)

Roberval and Saguenay

Railway Company, The

Saguenay Shipping Limited

Storall Limited

Supreme Aluminum Industries Limited (26.27%)

Vic Metal Corporation (20%)

United States

Alcan Aluminum Corporation
V. E. Anderson Mfg Co.

Fabral Corporation

Intercontinental Alloys Corporation (50%)

Luxfer USA Limited

Bermuda

Alcan (Bermuda) Limited

Caribbean

Jamaica

Alcan Jamaica Limited
Alcan Products of Jamaica Limited

Sprostons (Jamaica) Limited

Trinidad

Chaguaramas Terminals Limited
Geddes Grant Sprostons Industries Limited (49%)

Sprostons (Trinidad) Limited

Latin America

Argentina

Camea S.A. (35%)

Brazil

Alcan Aluminio do Brasil S.A.
Aluminio do Brasil Nordeste S.A.
Mineração Rio do Norte S.A. (19%)

Petrocoque S.A. (25.1%)

Colombia

Aluminio Alcan de Colombia S.A. (49%)

Mexico

Alcan Aluminio, S.A. (60.9%)

Uruguay

Alcan Aluminio de Uruguay S.A. (89.9%)

Venezuela

Alcan de Venezuela, S.A. (49%)

Europe

Belgium

Alcan Aluminium Raeren S.A.

France

Aluminium Alcan de France
Alcan-Schwartz, Filage et Oxydation (51%)
S.A. des Bauxites et Aluminés de Provence
Société Industrielle de Transformation et de Construction (SITRACO) (15%)

Germany

Alcan Aluminiumwerke GmbH
Alcan Aluminiumwerk Nürnberg GmbH
Alcan Folien GmbH
Aluminiumfolienwerk GmbH
Aluminum Norf GmbH (50%)
Cargo Van Fahrzeugwerk GmbH (50%)

Ireland

Alcan Ireland Limited
Unidare Limited (25.5%)

Italy

Alcan Alluminio Italiano S.p.A.
Alcan Angeletti & Ciucani Alluminio S.p.A.

Netherlands

Hunter Douglas N.V. (25%)

Norway

Årdal og Sunndal Verk a.s. (Asv) (25%)

Spain

Empresa Nacional del Aluminio, S.A. (ENDASA) (25%)
Productos Aluminio de Consumo, S.A. (50%)

Sweden

Gränges Essem AB (20.84%)

Switzerland

Aluminiumwerke A.-G. Rorschach

United Kingdom

Alcan Booth Industries Limited
Alcan Booth Extrusions Limited
Alcan Booth Sheet Limited
Alcan Booth Systems Limited
Alcan Building Materials Limited
Alcan Design Products Limited (75%)
Alcan Ekco Limited (50%)
Alcan Enfield Alloys Limited (50%)
Alcan Foils Limited
Alcan Metal Centres Limited
Alcan Polyfoil Limited
Alcan (UK) Limited
Alcan Wire Limited
Amari Limited (10%)
Thomas Bennett Limited
Bonallack Vehicles Limited
Cargo Van Equipment Limited (50%)
Freight Bonallack Limited
Freight Development Company Limited
Ian Proctor Metal Masts Limited (24%)
Johnson & Bloy Aluminium Pigments Limited (36%)
Luxfer Limited
Minalex Limited
Saguenay Shipping (UK) Limited
Serco-Ryan Limited

Africa

Ghana

Ghana Aluminium Products Limited (60%)

Guinea

Compagnie des Bauxites de Guinée (13.34%)

Nigeria

Alcan Aluminium of Nigeria Limited (72.87%)
Flag Aluminium Products Limited (65.22%)

South Africa

Hulett's Aluminium Limited (24%)
Silicon Smelters (Pty) Limited (33.33%)

Asia

India

Indian Aluminium Company, Limited (55.27%)

Indonesia

P.T. Alcan Indonesia (70%)

Japan

Nippon Light Metal Company, Ltd (50%)
Toyo Aluminium K.K. (50%)

Malaysia

Aluminium Company of Malaysia Berhad (34.48%)

Johore Mining and Stevedoring Co. Ltd (87.5%)

Thailand

Alcan Thai Company Limited

South Pacific

Australia

Alcan Australia Limited (70%)

Alcan Anodisers Pty Limited (70%)

Alcan Queensland Pty Limited

Queensland Alumina Limited (21.39%)

Quintrex Enterprises Pty Limited (65.59%)

New Zealand

Alcan New Zealand Limited (69.2%)

Alcan Alloys Limited (69.2%)

Alcan Anodisers Limited (69.2%)

Alcan Building Products Limited (69.2%)

Alcan Cory Metals Limited (34.6%)

Aluminium Anodisers (N.Z.) Ltd (34.6%)

Aluminium Conductors Limited (35.3%)

Barker Aluminium Industries Limited (69.2%)

Horizon Aluminium Products Ltd (34.6%)

Rolls Gerard Tile Company Ltd (34.6%)

Rolls Holdings Ltd (29.1%)

Holding and Financial

Alcan Aluminium (UK) Limited, London

Alcan Aluminio da America Latina, S.A., Rio de Janeiro

Alcan Europe N.V., Amsterdam

Alcan Finances Overseas N.V., Amsterdam

International Sales

Alcan Canada Products Limited (Trading Division), Toronto — Canada

Alcan Aluminio (America Latina) Limited, Montréal — Latin America

Alcan Asia Limited, Hong Kong — Hong Kong, Japan, India and other areas of Asia

Alcan S.A., Zurich — Continental Europe (excluding Germany and Scandinavia), Near and Middle East, North Africa, U.S.S.R.

Alcan Metall GmbH, Frankfurt — Germany

Alcan (UK) Limited, London — UK, Ireland, Scandinavia

Alcan Sales (Division of Alcan Aluminum Corporation), Cleveland — USA and Caribbean

Alcan Project Services Limited, Montréal — Engineering and feasibility studies, and project management, related to the aluminum industry

Alcan Trading Limited, Montréal — Worldwide; magnesium and other metals

Alcan Aluminium Limited

10-K Report

A copy of the Company's current annual 10-K Report filed with the United States Securities and Exchange Commission will be available to shareholders after 1 April upon written request to the Secretary of the Company.

Stock Exchanges

The common shares of Alcan Aluminium Limited are listed on the Montréal, Toronto, Vancouver, New York, Midwest, Pacific, London, Paris, Brussels, Amsterdam, Frankfurt, Basel, Geneva, Lausanne and Zurich stock exchanges.

Preferred shares: Montréal, Toronto and Vancouver stock exchanges.

Transfer Agents

Common shares:
National Trust Company, Limited, Montréal, Toronto, Winnipeg, Regina, Calgary, Vancouver.
Mellon Bank, N.A., Pittsburgh.
Citibank, N.A., New York.
Morgan Grenfell & Co. Limited, London.

Preferred shares:
National Trust Company, Limited, Montréal, Toronto, Calgary, Vancouver.

Édition française

On pourra se procurer le texte français de ce rapport annuel en s'adressant au secrétariat de la Compagnie, case postale 6090, Montréal, Canada H3C 3H2.

Registrars

Common shares:
The Royal Trust Company, Montréal, Toronto, Winnipeg, Regina, Calgary, Vancouver.
Pittsburgh National Bank, Pittsburgh.
Manufacturers Hanover Trust Company, New York.
The Royal Trust Company of Canada, London.

Preferred shares:
The Royal Trust Company, Montréal, Toronto, Calgary, Vancouver.

Definition of terms

In this report, all amounts are in United States dollars and all quantities are in short tons of 2,000 pounds, unless otherwise stated.

'Subsidiary' indicates a company owned directly or indirectly more than 50 per cent whereas 'related company' indicates a company owned 50 per cent or less.

The term 'Alcan' refers to the parent Alcan Aluminium Limited itself, or to one or more subsidiaries according to the context.

A Worldwide Outlook

Our inside cover shows the wide diversity of Alcan's growth after 50 years. The symbols indicate by geographic area or country the principal — but not all — types of operating locations in which Alcan has invested to develop the aluminum business on an international scale.

| | |
|---------------------|--|
| Bauxite | |
| Primary aluminum | |
| Alumina | |
| Fabricated products | |





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